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2024 FORMULA 1 SEASON PREVIEW AL THE DRIVESS - ALL THE TRANS - ALL THE GROUTS

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IGNITION

MARCH 2024



Contributors



OLEG KARPOV

This month's fare: an exclusive with the FIA president (p30), Zinedine Zidane and the Alpine drivers (p54), and a look at Sky Sports F1 (p76)



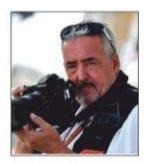
ANDREW BENSON

Despite McLaren's great second half of 2023, Lando Norris feels he could have done more. Andrew asks how Norris goes one better (p24)



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MARK SUTTON

Mark went behind the scenes with Oleg in Abu Dhabi to capture how Sky Sports F1 puts its GP coverage together (p76)



Lewis news brightens up launch season

The more things change, the more things stay the same. Seldom has the aphorism coined by Jean-Baptiste Alphonse Karr (or, for that matter, Jon Bon Jovi, if you're feeling lowbrow) been more true in the Formula 1 world. Let's start with the cover price of this issue of *GP Racing*, £7.99. We hope the product's additional girth – an extra 24 pages of season-preview wholesomeness – offsets any fury you may have experienced when you clocked the price label. Imagine how much Ferrari will have to whack on the sticker of an F8 to claw back the additional financial load of Lewis Hamilton's annual stipend... Don't worry, we'll be back to the regular price and page count next month. Phew!

I write this in the immediate aftermath of the team launches, a period fraught with sensations of mild disappointment these days since the majority of 'reveals' consist of the previous year's car with a new paint job. Much of the intrigue has surrounded the new game of how little actual paint a team can get away with, so challenging is it to engineer a car under the weight limit. The need to maintain some secrecy is understandable but, as we explore on page 46, convergence is biting rather quickly in this budget-capped era since pragmatism naturally trumps adventure. There are fewer big surprises on the tech front.

Little movement in terms of the cast list, too, at least for this season. Every driver remains where they were at the end of 2023; what's remarkable is that this is the first time these circumstances have arisen since the world championship began in 1950. We delve into the reasons for this on p34.

Slip into Toto Wolff's tasselled loafers for a moment. The contractual business of preparing for a new season was a diminishing speck in the rear-view mirror as he looked forward to a breakfast meeting with his multiple world champion. Did Lewis break the news that he was off to Ferrari for 2025 before or after comestibles were served? Doubtless Toto was left to prong several moody forkfuls as he ruminated over who might be available. As he would later confirm in an online press conference, the conversation with Lewis happened about six weeks too late, since the most immediately obvious candidates (he mentioned no names, but he meant Charles Leclerc and Lando Norris) had been pre-emptively taken off the table on a long-term basis.

It was ever thus in the world of the Piranha Club, as Ron Dennis memorably described F1's political sphere. See also the way the teams have closed ranks around the honey pot rather than admit a new team which might dilute the share (see page 8). Yes indeed, the more things change the more they stay the same...

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LEWIS DREAMS IN RED Hamilton signs for Ferrari for 2025

WHY HAMILTON KICKED MERC INTO TOUC

Few were expecting the pre-season to kick off with the driver market in sudden ferment. This was, after all, the first year in the history of the world championship in which absolute continuity had prevailed from one season to the next (see p34). And even if it was an open secret that this situation wouldn't last, the prospects of something as jaw-dropping as the most successful driver in championship history moving to its most successful team ever seemed unlikely.

It was almost a foregone conclusion that Lewis Hamilton, who had signed a new contract with Mercedes last summer, would end his career with the team which delivered him to his greatest successes – and that he would do so having made all of his grand prix starts in cars powered by Mercedes engines. The idea that he would then become a lifelong ambassador for the brand was seen as something of a done deal in the paddock.

What we now know is that Lewis was less than happy with the offer put before him, and the result is what could be described as the most high-profile driver move in the championship's history. Next season Hamilton will replace Carlos Sainz at Ferrari, saying, "I now have the chance to fulfil another childhood dream. Driving in Ferrari red."

Behind the gloss lies the twists and turns of tough negotiations. Insiders suggest Lewis wanted a three-year deal, but Mercedes wouldn't commit. The compromise reached six months ago was presented to the public as a two-year deal, but allowed for the possibility of termination after the first season.

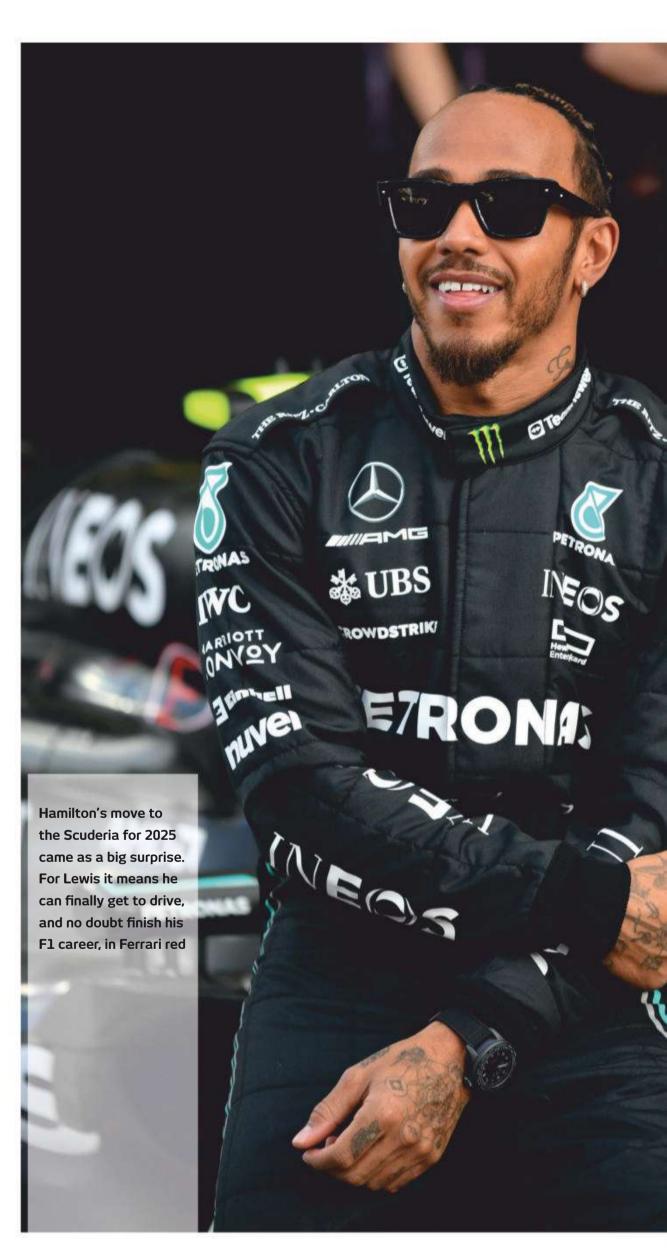
WHAT WE NOW KNOW IS THAT **LEWIS WAS LESS** THAN HAPPY WITH THE OFFER PUT **BEFORE HIM**

The existence of such a clause was confirmed by Mercedes when the team announced Lewis would be leaving at the end of the 2024.

"We're big boys, we knew by signing a short-term contract, it could be of benefit for both sides," said Mercedes boss Toto Wolff. "We couldn't commit for a longer period. And he's taken

the option to exit. We totally respect that you can change your mind. There's different circumstances. Switching to Ferrari, maybe for the last gig in his career, rolling the dice a bit."

As for why Wolff and Mercedes weren't able to "commit for a longer period" to Hamilton, one explanation could be Andrea Kimi Antonelli. The 17-year-old Italian, a member of the



AMDI AMDI AMDI AIREI



Hamilton and Ferrari team principal Frédéric Vasseur go back a long way. Lewis drove for Vasseur's ART team in 2005 and 2006 when he won the F3 Euro Series and GP2 titles

Andrea Kimi Antonelli is seen as Hamilton's long-term replacement but is still only 17, so promoting him straight to Mercedes for 2025 would come with risks





Mercedes junior programme, is about to begin his first season in Formula 2, but many are already comparing him with Max Verstappen.

It's likely Wolff envisioned Antonelli replacing Hamilton after the 2025 season – say, after a triumphant maiden campaign in F2 and a debut F1 season with, for example, Williams. While it's too early to predict how Antonelli's career will progress – after all, he's only had a couple of years in single-seaters – the feedback has been good enough for him to have been kept under the table while negotiating with Hamilton.

But on Hamilton's side, it seems as though Ferrari came up with an offer at exactly the right time – offering Lewis a lot of what Wolff could not. And that may well have helped that "childhood dream of driving in Ferrari red" outweigh a long-running loyalty to Mercedes.

For Ferrari itself, signing Hamilton is a huge statement, and it's already seen in Italy as a big win for Ferrari chairman John Elkann, who is believed to have been instrumental in getting the deal done. For him, it's the best way to show how much Ferrari management believes in the project led by Frédéric Vasseur. Vasseur is also believed to have played a significant role in the negotiations with Lewis. It was driving for

Vasseur's teams that Hamilton won his pre-F1 titles in Formula 3 in 2005 and GP2 a year later.

The timing of Hamilton's news can be seen as something of a defeat for Mercedes. Not only did it come as a surprise - but Hamilton's decision came shortly after new long-term contracts for Charles Leclerc at Ferrari and Lando Norris at McLaren took those two off the market.

This leaves Wolff in an uncomfortable position. During his post-announcement media briefing, he noted Lewis's departure could be "a chance to do

CEO John Elkann (below right) something bold" for Mercedes, but refused to explain what exactly he meant.

Carlos Sainz (right)

in a straight swap

in 2025, but this is

The signing of Lewis

thought unlikely.

is seen as a huge

victory for Ferrari

could replace Hamilton

It's been suggested the main option at the moment is to promote Antonelli straight after his first season in F2. This would be risky. Wolff lost the battle for Verstappen to Red Bull in 2014 and will not want a young talent

THE TIMING OF HAMILTON'S NEWS CAN BE SEEN AS

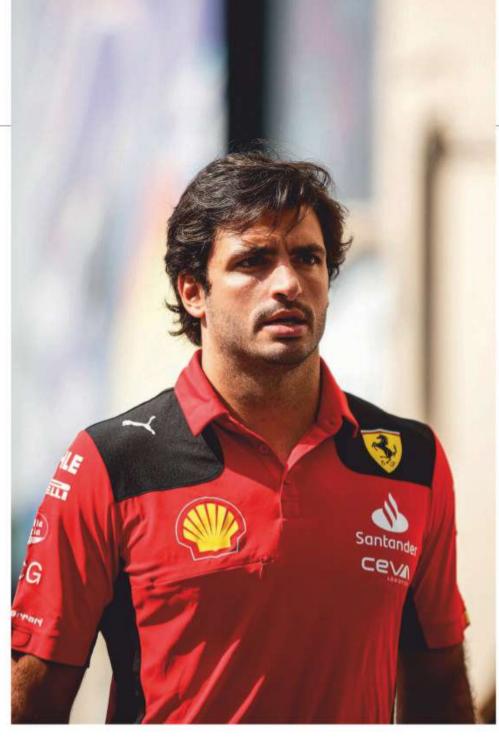
SOMETHING OF A DEFEAT FOR **MERCEDES**

to slip from his grasp again, but a premature elevation to a top-tier team could backfire.

There is the option of signing Carlos Sainz. It would be convenient, but would it be acceptable for Mercedes to sign a driver who has effectively been shown the door by Ferrari? And would Carlos be happy to sign a contract in the knowledge that he's seen merely as a stopgap while Antonelli matures? Audi seems the most logical option so far, especially considering his influential father has just won the Dakar at the

wheel of an Audi. Yes, the four-ring logo won't appear above the door until 2026, but Carlos could well spend 2025 driving for Sauber (or whatever the Hinwil-based team is now officially called) to settle in.

Then there's Fernando Alonso. He, like Hamilton, isn't getting any younger – but if he were to make the move there could be benefits. Antonelli could slot in and learn with the Merc-aligned Aston Martin team while Alonso scratches his competitive itch. Alonso claims his priority is to talk





to Aston about his future beyond 2024 – but, to paraphrase Mandy Rice-Davies, he would say that, wouldn't he?

Esteban Ocon's contract with Alpine expires at the end of this year and he has previous links with Mercedes. He is believed to be a fringe candidate at best, though. Wolff could promote reserve driver Mick Schumacher – but replacing a seven-time world champion with a driver considered not good enough to cut it at Haas would not be an upgrade. Alternatively, Sebastian Vettel could be called out of retirement. This, too is unlikely. So whatever decision Wolff now makes, it will not only look "bold", but also forced.

WORK CONTINUES'' AT ANDRET II DESPITE F1 SNUB

Michael Andretti's bid for a Formula 1 entry for his team has been officially rejected by Formula One Management. The commercial rights holder said it did not believe the American team would "add value to the championship".

The decision comes after months of speculation. Andretti's desire to enter F1 with his team has been known since early 2022, but he was always going to be up against heavily entrenched opposition. FOM made it clear it did not want to expand the grid. However, Andretti's persistence led many to believe he was getting closer to forcing a U-turn.

In October last year, the team's application was officially approved by the FIA. By then, the American outfit had secured the backing of GM, which announced it would eventually build its own F1 engines to supply Andretti, and had begun recruiting staff. Shortly before the FOM statement, reports appeared in the press confirming dozens of engineers were already working on a car which could be ready to race as early as 2025. Without waiting for a final decision from the championship bosses, Andretti hired former Renault technical director Nick Chester, who started work in April 2023, as well as many other staffers with F1 experience.

However, when announcing its decision in early February, FOM said that it did not believe Andretti would be competitive. It stressed that if the team were to make its debut in 2025 it would have to develop its first two cars to two different sets of regulations – the current one and the one which will come into force in 2026 – at almost the same time. The fact that Andretti decided to embark on such a venture in the first place, the FOM said in its statement, "gives us reason to question their understanding of the scope of the challenge involved".

No mention, however, was made in the FOM statement of the fact that then-newcomer Haas had tackled a similar challenge with relative success in 2016 and 2017.



Images of the work Andretti was undertaking on its F1 project (above) were revealed just before the team's entry for 2025 was refused

FOM's statement made several other claims whose merits were debatable at best. Noting that GM cannot start supplying Andretti with its own engines before 2028, FOM concluded that "any new team" would have "to take a compulsory power unit supply" from an established manufacturer, which in turn "would be damaging to the prestige" of the championship. This is curious since FOM does not seem to be embarrassed

> by already having teams on the grid using customer power units.

The statement also noted that "while the Andretti name carries some recognition for F1 fans, our research indicates that F1 would bring value to the Andretti brand rather than the other way around". A generous response would be to say this is, at best, an interesting observation at a time when F1

fans around the world are seeking creative solutions for new chants about the likes of Visa Cash App RB and Stake F1 Team Kick Sauber. Given the resonance of the Andretti name in the US – a key target market for F1 – let alone Mario Andretti's presence in the record books as a grand prix winner and world champion, FOM's position is perhaps best described as platitudinous cant.

Either way, the story of Andretti's fight for an F1 entry ticket may yet have a sequel. FOM indicated it "would look differently on an application for the entry of a team into the 2028 championship with a GM power unit, either as a GM works team or as a GM customer team designing all allowable components in-house", suggesting it may yet reconsider its decision if the application is resubmitted later.

Andretti, in the meantime, insisted in a statement of its own that it "strongly disagrees" with the FOM's arguments, in particular that the team had underestimated the challenge of building two cars for two regulations concurrently.

"The FIA approved our application, with no specific limitation on whether the entry was for 2025 or 2026," the team's statement read. "Andretti Cadillac has been operating with 2026 as the year of entry for many months now. The technicality of 2025 still being part of the application is a result of the length of this process."

The team also added: "Our work continues at pace." The message suggests that Andretti will continue to try to make it into F1, even if its path to getting there seems as unclear as ever following the FOM's official rejection.





BARCA'S REIGN SPAIN ISN'T

Rumours of the Spanish Grand Prix moving from Barcelona to Madrid had circulated for most of 2023. Now it's official: the new circuit, which features both street and non-street sections, will be built around the IFEMA exhibition and conference centre to the north-east of the city and will host Spain's eponymous F1 race from 2026.

The move of the Spanish Grand Prix to the capital, however, doesn't necessarily mean Barcelona will disappear from the F1 calendar. The owners of the circuit, a permanent calendar fixture since 1991, are planning a €50 million reconstruction and hope this will lead to a new agreement with F1 – using a different event name.

Barcelona GP, Catalan GP or European GP have already been mentioned as possible options. Previously, F1 races were held at the Jerez and Valencia circuits under the European Grand Prix moniker.

Championship boss Stefano Domenicali emphasised he was not ruling out the possibility of F1 holding two races a year in Spain again.

"There are discussions in place to see if we can really extend our collaboration with Barcelona, with whom we have a very good relationship, for the future," he said. "Spain was a market that just a couple of years ago was not in the centre of our eyes. Now it is very important."

Madrid – more specifically the autonomous community of that name – previously hosted F1 nine times between 1968 and 1981 at the Jarama circuit, 20 miles outside the capital. The contract with the new Madrid venue will run for 10 years, through 2035.

It was also announced agreements with race organisers



Madrid got a taste of F1 when Red Bull did a demo there last year (above). From 2026 onwards it will host the Spanish GP around its streets (below)



in Japan and Britain, set to expire this year, have been extended. The new deal with Suzuka runs until 2029. Circuit owner Honda confirmed last year that it would remain in F1 as an engine supplier through an agreement with Aston Martin, so a Japanese GP contract extension was widely expected.

The Silverstone race organisers have signed a 10-year deal, guaranteeing the race a place on the F1 calendar until at least 2034. Other events with long-term deals include Austria and Saudi Arabia (both until 2030), Canada (2031), Hungary and Qatar (2032), Abu Dhabi (2035), Bahrain (2036), and Australia (2037).

PAYBACK'S A HITCH OR DE VRIES

Nyck de Vries' Formula 1 career turned out to be very short and rather unsuccessful in terms of results. Though already over, it now threatens to be a financial burden, too. At the beginning of February, the Amsterdam District Court ruled the Dutchman must pay a former backer €250,000 plus half

The case against de Vries was brought by Jeroen Schothorst, who helped Nyck secure a seat in the Prema F2 team in 2018.

of the money he earned during his time in F1.

NEWS IN BRIEF... NEWS IN BRIEF...NEWS IN BRIEF...



RACES

Tourism bodies in Osaka have confirmed that Japan's third most populous city is putting together a bid for an F1 race. A street race, permanent track or hybrid circuit at the Osaka Expo are all thought to be on the table.

SENNA

Netflix is working on a biographical mini-series on Ayrton Senna. Starring Gabriel Leone, a Brazilian actor, it will trace the whole career of the threetime world champion, who died at Imola in 1994. It is expected to be released later on this year.

MONEY

Formula 1 owner retained its place at the top of the prestigious Forbes magazine list of the most valuable "sports empires". The current value of the company's ownership of sports assets stands at \$18.22 billion.

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De Vries has been ordered to pay back his former sponsor the money that was invested in his career, and 50% of his F1 earnings

De Vries had just lost the support of McLaren (he had been a member of its junior programme since karting), but was able to continue in single-seaters thanks to the help of Schothorst's Investrand company. The terms of the contract meant if de Vries became an active F1 driver he would have to return the €250,000 that helped him continue his career, and pay the sponsor half of his F1 earnings. Importantly, the contract stipulated de Vries would only have to repay the sponsor if he became an active F1 driver by 2022 - otherwise Investrand would write off the loan.

For a long time, Schothorst's prospects of recouping his investment looked slim. Nyck won the F2 championship in 2019, but failed to secure a seat in F1. It wasn't until 2021 – as a Mercedes driver in Formula E – that Nyck became a reserve for the Merc's F1 team, but Investrand agreed not to consider this a cause for demanding the repayment of the investment.

Complications arose after the 2022 Italian GP, when de Vries had to substitute for Williams' Alex Albon. The race, which helped him attract the attention of Red Bull bosses, eventually became the linchpin of Schothorst's case that Nyck must pay back the €250,000 loan and disclose the terms of his AlphaTauri deal in order for Investrand to claim the aforementioned half of the earnings.

De Vries and his lawyers insisted that taking part at Monza could not be considered the start of a proper F1 career since de was only acting as a reserve driver. And in an initial summary court proceeding last winter, this argument had been accepted.

But now, after a full hearing, the judge has sided with Investrand, confirming that Nyck's participation in the 2022 championship race is a legitimate reason for the company to demand a return on its investment.

"We supported Nyck at a crucial moment in his career, when no one else wanted to do so," said Schothorst, commenting on the decision. "I am happy that the judge has now ruled in our favour, although I of course regret that this procedure was necessary.

COMPLICATIONS AROSE AFTER THE 2022 ITALIAN GP, WHEN DE VRIES HAD TO SUBSTITUTE FOR WILLIAMS' ALEX ALBON

"We would have preferred to reach an arrangement without procedures through proper consultation, but unfortunately our attempts to do so were resolutely rejected by Nyck and his lawyer. This made going to court inevitable."

De Vries, according to reports, plans to appeal the decision.

MASTERMIND Your chosen specialised subject:

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- Q1 Three drivers born in Monaco have started a world championship F1 GP. Who are they?
- Q2 At which circuits did Alex Albon claim his two F1 podiums in 2020?
- Q3 Which Nürburgring layout hosted the most GPs: the Nordschleife or the modern day circuit?
- Q4 Eddie Irvine, Nigel Mansell and which other driver are the last three British-born drivers to race for Scuderia Ferrari in F1?
- Q5 True or false: Mercedes has never gone through a season without a front-row start?
- Q6 Who am I? I started 146 GPs from 1972 to 1982 for Brabham, Ferrari, Lotus and Williams, winning 12 times and claiming six pole positions.
- Q7 Who was Ralf Schumacher's first team-mate in F1: Giancarlo Fisichella, Damon Hill or Alex Zinardi?
- Q8 Max Verstappen has managed 54 GP wins but which two races has he won the most, one of them five times and the other on four occasions?
- Q9 Which were the three teams that claimed a solitary fastest lap in a GP in 2023?
- Q10 How many times did the two Alpine drivers start on the same row of the grid in 2023: 3, 4 or 5?



L Louis Chiron, Olivier Beretta, Charles Leclerc **Z** Sakhir and Mugello

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Tom confirms, "and the understanding was that we would fully embed. We would tell the story of that race weekend, which happened to be the German GP, when they dressed up in period costumes, and had probably the worst GP they'd had since returning to F1."

Both Lewis Hamilton and Valtteri Bottas crashed into barriers in wet conditions and, even though Lewis was able to rejoin, it was a nightmare weekend at the team's home event.

"To their credit they held their end of the bargain," Tom says. "They didn't try to shy away from the fact that it was a pretty disastrous weekend and they let us tell that story."

Since then the show has developed further with a target that it never becomes predictable. Each season throws up new stories and it's the same with the latest version. 2023 didn't have a huge rivalry for titles but it did remind Tom of that first year of needing to look offstage. In doing so they have come across the highs and lows of F1.

"Remember Lance Stroll had broken his arm and nobody knew if he was going to make the first race," Tom explains. "And there was Aston Martin's resurgence. There are some really great storylines in episode one. Bahrain was really interesting from that perspective."

> Other stories spread out over the full season can be given a more direct focus in single episodes such as the travails of AlphaTauri.

> "Nyck de Vries at the start of the season had a tricky time and was replaced by a *Drive To* Survive stalwart character, Daniel Ricciardo," says Tom. "Then Daniel broke his wrist and Liam Lawson came in, and then the question became 'Will Daniel come back before the end of the season?' And all of this plays really well because it's all human-interest focus."

Red Bull only failed to win one GP last year, but the story of Ferrari's victory in Singapore was combined with unique access regarding the famous team's heritage.

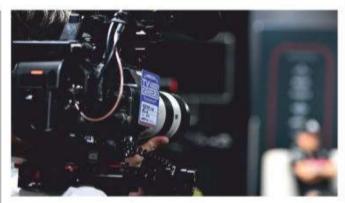
"I don't think anybody who isn't an Italian Ferrari fan can quite understand the pressure and focus that is on that brand in Italy," says Tom. "We filmed in Maranello, a sort of hallowed ground. It's very unusual to be allowed in there. The access for Season 6 has been particularly good. They've been true to their word and hopefully when everyone sees the show they'll get a new insight into Ferrari."

And as the team doors have creaked open further there is plenty to enjoy. "They've all been supportive of the show," Tom says. "They've all committed, and the access in many respects has continued to get stronger, which is testament to us being able to deliver a compelling 10 episodes every year. Without the teams there is no show, nothing to tell, because ultimately the people are what make the show so interesting."

PEOPLE POWER: THE SECRET OF NETFLIX'S SUCCESS

As interest in a new F1 season ramps up, it's the perfect time to go behind the scenes to last year's record-breaking championship. Season 6 of Drive To Survive is 'dropping' on Netflix thanks to production company Box to Box Films and its team of producers, editors and experts. Many of those involved have learned about F1 by working on the series but co-executive producer Tom Rogers, who was engaged from the beginning in 2017, carries his own faithful memories of camping at Silverstone as a kid and developing his passion many years ago.

Success of the series has led to a growing fanbase around the world, yet there were some tricky aspects when filming began – including two of the top teams declining access, as Tom explains: "The reality of a show like this is that it requires an enormous leap of faith for everyone involved, especially being a sport like F1 with its history; it's naturally a very secretive world. There's so much competitive advantage that could be gained by just



The Netflix cameras are now very much a part of the Formula 1 paddock furniture for everyone

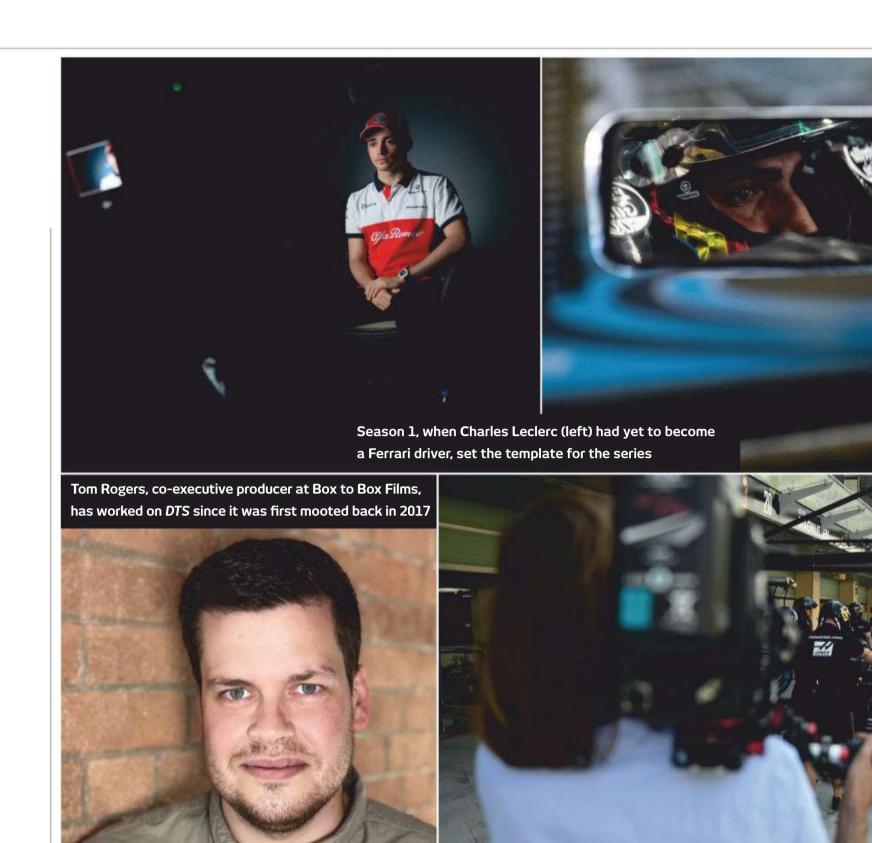
seeing a little bit of a car that's normally hidden. At that point Mercedes and Ferrari probably had most to lose by taking part and some of the other teams saw more of an upside and less of a risk."

Haas was happy and allowed full access at the first race in Australia in 2018. The team was on target to score 22 points, but cross-threaded wheelnuts during pitstops led to both cars retiring.

"The wheels literally fell off both cars," Tom remembers, "and as soon as that happened, we thought, 'OK, we might have an episode one.' That was it, the train was off and hasn't stopped since."

That drama, plus many others, were absorbed a year later as the first series was broadcast and delivered a unique insight. The previously cautious top teams soon joined in, although selecting a particular event to allow filming doesn't always go to plan as Mercedes quickly discovered.

"We agreed that we would film one race only,"



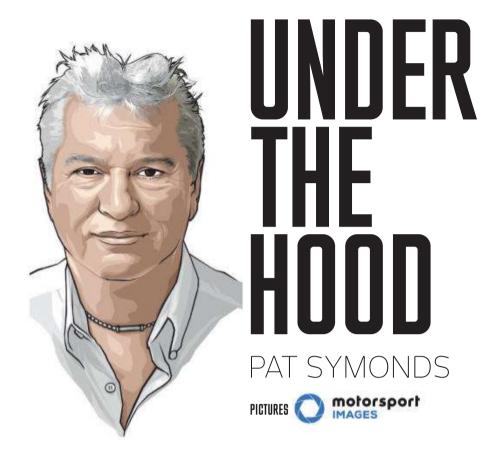
The star of season 1, Haas, was still a big part of the Drive to Survive narrative in season 2 as the series continued to look behind the on-track action





Season 4, covering the 2021 championship, was another great success, even if Max Verstappen (right) refused to take part in the series. He returned for season 5





sophisticated rig. The modelling is done by using a computer to solve the equations of motion of the system. Many will remember from school physics Newton's second law of motion: that the acceleration of an object depends on the mass of the object and the force applied to it. This is an equation of motion, and, for a suspension system, we're able to write a much more complex equation which sums all the forces and resistances from the inputs to the system and the suspension elements such as the springs and dampers. The equations are slightly complicated by the fact that the stiffness of the suspension is different depending on how much it's deflected. Engineers call this non-linearity, but computers deal with this

relatively easily.

As with any computer modelling, it's no bad thing to back it up with some practical experiments and it's here the test rigs come into play. One can test just one corner of a car on what's called a quarter-car rig but, these days, teams have access to rigs that can support the whole car and effectively shake it by moving powerful rams under the tyres to replicate bumps.

In the early days of this testing a simple vibration signal of varying frequency was fed into the rams in what was known as swept-sine testing. This was because the actual 'bumpiness' of the tracks couldn't be measured. These days it can, and track replay is a common test technique.

I started doing this testing when we were developing active suspension in the 1980s. We had to use one of the few rigs available to us and these were always 4-post rigs. In other words, they had one actuator (or post) under each wheel. The one I used had been designed to test armoured vehicles so was rather meaty. We then needed to add something which replicated downforce. This had to be a constant force irrespective of the displacement of the vehicle on the rig. Our first attempts at this were with constant-force springs of the type you find in the Tensabarriers that control queues at airports. In fact, Tensator – who make those barriers – made us special springs. The biggest problem with these was friction and they had to run in copious amounts of oil. A later development was to use a giant gas spring. This is another non-linear device

STIFFNESS: THE ANSWER IS IN THE RIGGING

We have discussed in this column previously the importance of ride quality even in a stiffly sprung racing car, but the current Formula 1 aerodynamic regulations have led to teams getting maximum performance by running the cars very close to the ground. This very limited ground clearance leads to needing extremely stiff springs to maintain the low ride heights under the immense downforce that's trying to compress the springs and tyres, and push the plank and the skids into the track.

These very stiff springs lead to a very harsh ride. Now the total vertical stiffness of a car is not just a function of the suspension springs. Any vertical load, whether it comes from the aerodynamic downforce or bumps in the road, also has to pass through the tyre – and the tyre is in itself a spring. You'll have noticed in your own cars how, if you park on a kerb, the tyre is compressed. This is because more load is passing through it. There is very little you can do to alter the spring rate of the tyre – in fact the only thing under the control of



Deciding how stiff to make the the suspension is initially done by modelling the system and then testing it on a rig

the teams is the tyre pressure and they want to run this as low as the prescriptions from Pirelli will allow, so they can optimise the contact patch.

So how does a team go about deciding how stiff to make the suspension springs to find the correct compromise between supporting the car close to the ground and yet giving it enough suppleness to absorb at least some of the bumps?

The answer lies first in modelling the suspension system and then in testing it on a









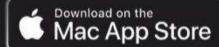
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Current aero regulations means teams are aiming to run their cars as low to the ground as possible, some with more success that others

A car's suspension must be stiff enough to keep the car close to a track, but also give it enough flexibility to absorb some of the bumps

but, if the volume of the gas chamber is very large relative to the displacement needed, it behaves like a constant-force spring.

As the control systems for the rigs improved, and as more teams started installing custom devices in their own factories, the move was made to seven-post rigs where three additional, carefully controlled, actuators provided a constant load to replicate downforce.

To assess ride quality, accelerometers are placed on the actuators, the wheel hubs and the body.

By looking at how the acceleration (and hence force) is transmitted from the actuator to the wheel and body using a mathematical technique known as a transfer function, one can determine the effect of different settings on the vertical wheel control (for tyre grip) and the chassis control (for aerodynamic consistency).

There's still something of a skill in deciding how to trade off the wheel-control

WE MUSTN'T CONFUSE RIDE QUALITY IN THIS CONTEXT WITH THE HARSH IMPACTS CAUSED BY THE PLANK AND SKIDS HITTING THE GROUND

quality and the chassis control and this is done using a ride-performance index. This is another equation that will look at the transfer functions at the front and rear contact patches as well as the transmissibility and damping in the bounce and pitch modes. The actual weighting applied to each comes from experience and will depend on the required characteristics that nuances of the regulations determine. The current regulations,

for example, put much more emphasis on chassis control to maintain downforce than it might on the wheel control, hence the stiff ride we see.

Finally, we mustn't confuse ride quality in this context with the harsh impacts caused by the plank and skids hitting the ground. This can be damaging to the drivers, and it is this that the FIA regulated for a while when teams were tending to run the cars too low.



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Essential guide to the business of F1



STRAIGHT TALK

MARK GALLAGHER

X@_markgallagher



for the new season, he has to explain why he, one of Formula 1's best known team principals and a star of Netflix's *Drive To Survive*, is no longer employed.

I've previously written about the dawn of the hired-in team principal, the pitfalls which come with taking on what used to be the top job in a team. Gone are the days when the team principal owned the business. Only Toto Wolff can renew his own contract.

Team principals are answerable to the owners. The successors to eponymous team owners such as Enzo Ferrari, Ron Dennis, Frank Williams and Eddie Jordan are John Elkann, His Excellency Shaikh Mohamed bin Isa Al Khalifa, Matthew Savage and Lawrence Stroll.

As changes in ownership have swept through F1, so too the role of team principal has evolved, together with the background of those appointed. Eight of the 10 team principals are now engineers, yet the two teams which have dominated the sport for a decade and a half are led by businessmen: Toto Wolff and Christian Horner.

What this says is that a new generation of team owners see the team principal's role as primarily technical in that their job is to

lead a team of engineers and technicians to design, develop and race a Formula 1 car.

The wider responsibilities previously shouldered by owner-bosses are now shared across broader, more complex organisational structures. These often separate out the team principal title from that of the chief executive, chief commercial officer and chairman.

While the team boss focuses on the racing, others take care of, oversee or sometimes dictate negotiations with F1 and Liberty Media, politicking with

the FIA, searching for sponsors, handling media and targeting drivers.

Guenther Steiner has his fans and, as with anyone in a high-profile role, his critics too. Yet the diverse requirements for team principals to be inspirational leaders, commercial titans, technical geniuses and media stars have never been more conflicted.

Will we see more team principal changes?

No question about it. After all, it is the

Drive to Survive.

WHO YA GONNA CALL? RENT-A-BOSS

It's the morning after the shock announcement of Gene Haas's appointment of Ayao Komatsu as team principal of Haas F1 when my phone pings with a message from Guenther Steiner. I'm in Australia and enjoying my first coffee, but it's the previous day for him thanks to the time difference.

At this point I should declare an interest, since my company works with Guenther and we enjoy a good relationship. Once he realises that's it's not late at night for me, we jump on a call.

He is, as always, positive, bullish and pragmatic. It's Gene's team and he can call the shots. After a decade of bringing Haas F1 into the world and leading it through times both good and bad, Guenther's experience of working in motorsport for three and half decades has prepared him well. Change happens. Frankly, shit happens.

The one thing which genuinely surprises Guenther is the reaction to him being replaced. The calls and messages he's had, and also the people he's heard from. The outpouring of neargrief from many fans and the media hysteria



Steiner greets Crofty ahead of the interview, just two days after his shock departure from Haas

surrounding this departure.

His surprise escalates further when he fulfils his commitment to opening the *Autosport* International Show in Birmingham two days later. Some fans are in tears.

Appearing on stage, where he is interviewed by Sky Sports F1's David Croft, the questions have changed. Rather than talking about Haas's hopes



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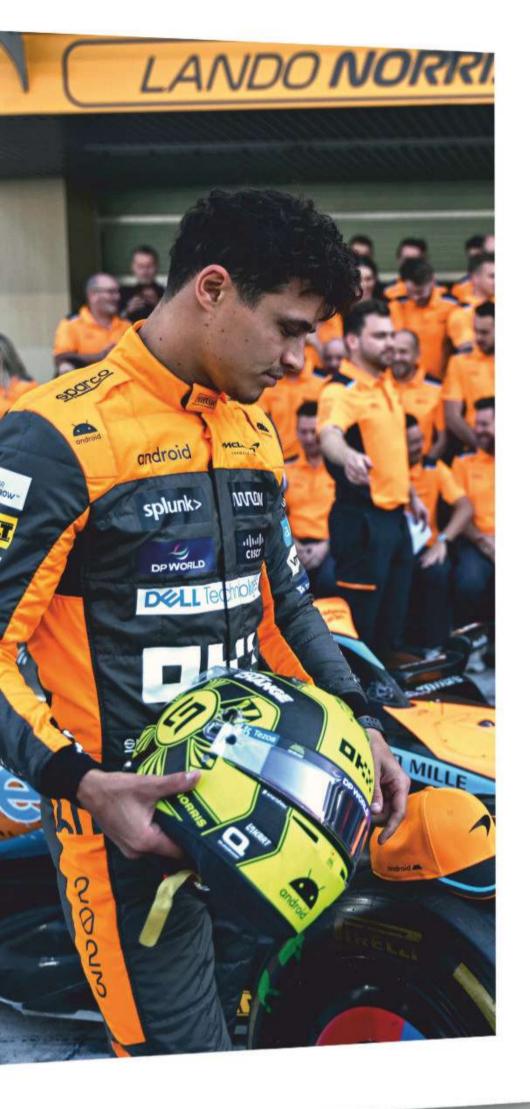


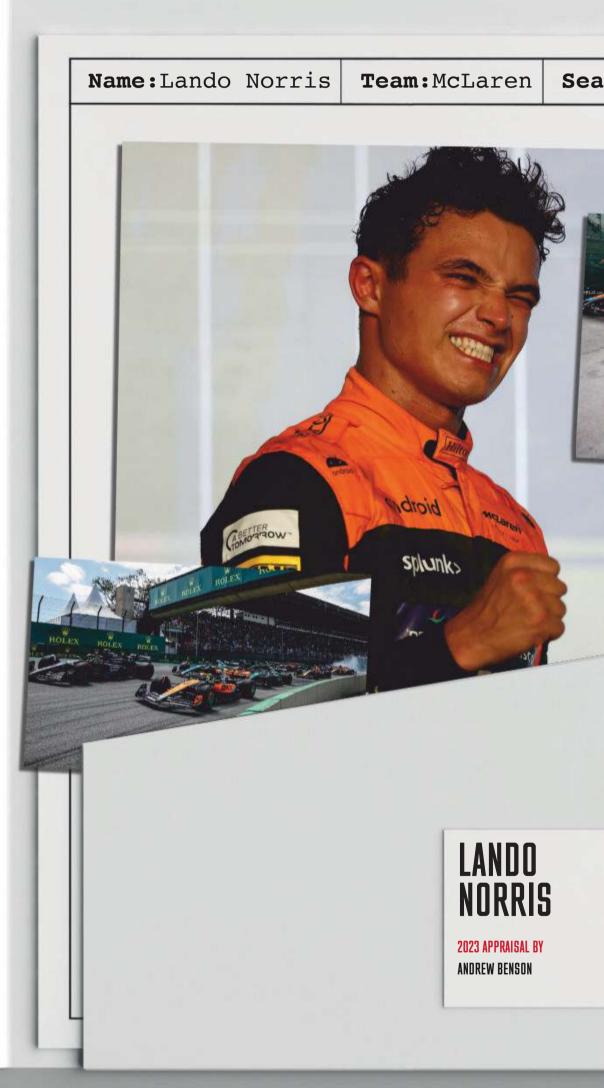














Lando Norris ended 2023 having consolidated his status as one of the top four or five Formula 1 drivers, but also admitting: "I can do better."

In the context of a season of almost unprecedented perfection from Max Verstappen, the same could be said of any of Norris's immediate rivals. Lewis Hamilton, Fernando Alonso, Charles Leclerc, Carlos Sainz and George Russell – to list them in championshipfinishing order – all made mistakes at one point or another last season. But in the case of Norris, you could see his point.

On the one hand, his season was highly impressive. From the introduction of McLaren's first major upgrade in Austria, Norris was the second-highest scoring driver of the season with 193 points, 34 more even than the second Red Bull driver Sergio Pérez. Norris outscored Leclerc by 41 points despite his and Ferrari's strong end to the season, and Hamilton by 61.

But at the same time, there was a strong sense of what might have been.

Verstappen was out of reach, and any criticism that Norris could have fought the Dutchman harder when the Red Bull was coming back through the field in Austin or Brazil was founded on a misunderstanding of the superiority of the most dominant car in history on race days.

In those situations, Norris – like anyone else in 2023 – was literally helpless. Fighting Verstappen only risked chewing up his tyres and losing him race time to his real rivals.

Leaving Verstappen out of it, though, there were some high-profile mistakes from Norris. Most, but not all, in qualifying.

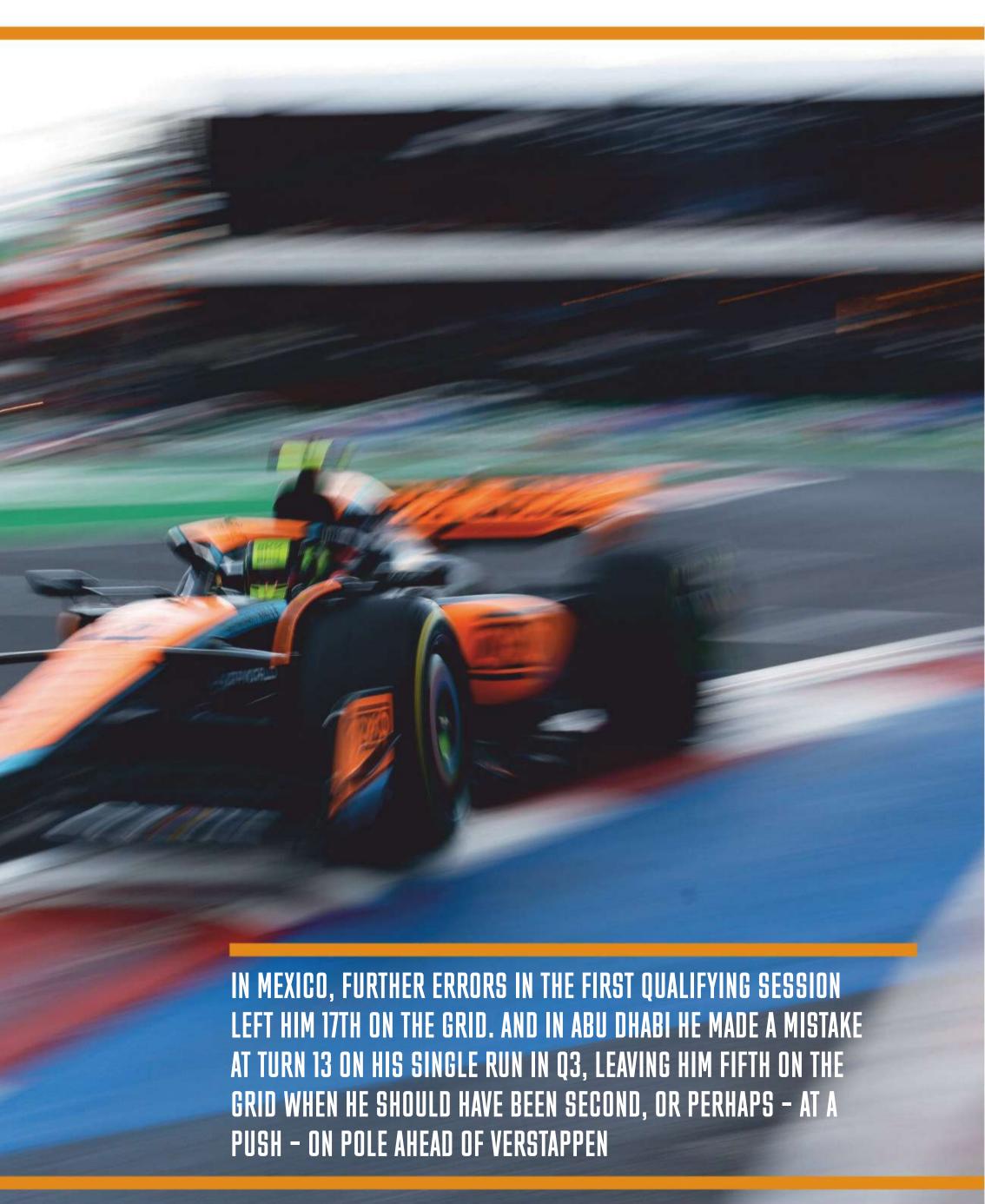
In Qatar, he qualified 10th for the grand prix after track-limits transgressions on both his runs left him without a time in the final session. And he missed out on pole in the sprint race after another error let team-mate Oscar Piastri in for the place at the front of the grid.

From there, it was Piastri who took McLaren's only race win of 2023 as Norris fought back to third after a bad start.

In Mexico, further errors in the first qualifying session left him 17th on the grid. And in Abu Dhabi he made a mistake at Turn 13 on his single run in Q3, leaving him fifth on the grid when he should have been second, or perhaps — at a push — on pole ahead of Verstappen.

And earlier in the season, when McLaren







was struggling, there was a very odd crash in qualifying when he hit the inside wall at the final corner in Saudi Arabia.

Mexico, in a way, provided a microcosm of this part of Norris's season. He was understandably angry with himself after making a horlicks of qualifying. But his race performance was one of the drives of the season, to the point that team principal Andrea Stella called it a "kind of masterpiece", and likened it to Valencia 2012, when he was working with Alonso at Ferrari and the Spaniard won from 11th on the grid, arguably his greatest-ever victory in his greatest-ever season.

It's easy to understand, then, why Norris would sum up 2023 by saying: "It was clear there's places I need to work on and places I didn't always deliver as much as I should've done."

OPPORTUNITIES AND KNOCKS

Norris, like Leclerc, often falls into self-criticism when he has made costly mistakes such as these. Not for them the typical racing drivers' excuses. They want to own up to their errors – own them, in fact – so they can learn from them.

"I care about doing a good job and trying to deliver for the team," Norris says. "It's just the way I work best. It's the way I'm able to bounce back best."

It's valid to point out that the proof is in the pudding, so to speak – that it's all very well being self-critical, but what matters is delivering on that desire to improve. But his boss Stella is not concerned.

The Italian, who has worked with Michael Schumacher and Kimi Räikkönen as well as Alonso, would not only have deserved F1's team boss of the year award if it had one, for masterminding the team's vertiginous rise up the grid in 2023, but has also emerged as one of F1's most thoughtful and insightful analysts. The two are almost certainly related.

"Definitely it was a strong season for Lando," Stella says. "From Austria, he is the second highest scorer behind Max, so this reflects the quality of the driving, the delivery he is capable of as an F1 driver which puts him at the top of the grid.

"At the same time, opportunities are available. We have had some contacts with some of the walls, like the one in qualifying in Saudi, which came a little out of the blue, really. And I would say when you ask: 'Where do they come from?' I don't think there is a single element one

should identify and attack.

"When you deal with champions, when you deal with delivering at such a high level in professional sport, you need to look at opportunities very holistically.

"Things are also quite connected. The physical state is connected with the mental state, is connected with the wellbeing overall, with the integration in the team. All these factors are very strong on Lando's side. But the game is so competitive that you need to be at the top consistently. That's what makes the difference.

"It's not really the top potential. Especially for Lando, it's almost unexplored as to how good he is. Sometimes he surprises us with some of the performances he can put together.

"Think of the pole for the sprint in Brazil after he had lost 0.2-0.3secs in the first sector. How did he manage to put it on pole in the other five corners? That was just amazing.

"But consistency in this kind of delivery is what makes the difference, and I think Max is establishing new standards from what we've seen recently in terms of how consistently you can perform strongly. That's the objective with our drivers, and it's something we have at the top of our agenda into 2024."





Norris celebrates second at the British GP with McLaren CEO Zak Brown and the rest of the team. It was his first podium of the season

THE PIASTRI FACTOR

Anyone looking for an explanation for Norris's few high-profile errors through 2023 is inevitably going to look across the garage at the driver in the other McLaren. After two seasons of comfortably outpacing Daniel Ricciardo, Norris found himself partnered last season with Oscar Piastri, an Australian rookie tipped for the very top.

McLaren fought a contract dispute with Alpine for his services - admittedly, Alpine's ham-fisted handling of Piastri's situation didn't make that very hard - and Piastri didn't disappoint, with an impressive debut season.

It was Piastri, rather than Norris, who took McLaren's first pole of 2023, for the sprint race in Qatar, and Piastri who delivered on it to take McLaren's only win, also in the sprint in Qatar. Norris did subsequently take pole for the sprint in Brazil, but his errors prevented him repeating that in other places where he might have.

Was Piastri's pace the cause of Norris's mistakes? Did it put him under pressure, cause him to try too hard?

That argument is not backed up by statistics. Norris outqualified Piastri 15-9 at an average of 0.184 seconds. And he retained a decisive edge despite Piastri's improved performances in the



MAKE ME A WINNER

McLaren heads into the new F1

season cautiously optimistic that it can continue the upward trajectory it launched with the Austrian GP upgrade, but anxious about what Red Bull might have done over the winter.

Team principal Andrea Stella said the team had not "seen diminishing returns" in its development path. "In the wind tunnel development, the CFD development, the gradient we established last vear that led to the Austria and Singapore development," he says, "it seems like we can maintain it."

McLaren is confident, too, that development can continue in season. "We're already starting to work on further developments which we hope to bring relatively soon in the season and they also seem to be quite interesting," Stella says.

Stella's changes
to the team –
particularly bringing
Peter Prodromou
back to the front
line of design as
technical director
in charge of
aerodynamics – have
already proved a
massive hit.

Over the winter, the final two pieces of the reshuffle were concluded – David Sanchez, formerly of Ferrari, joined as technical director in charge of performance, and Rob Marshall, ex-Red Bull, as technical director in charge of engineering. In short, it is Sanchez's

job to come up
with concepts,
Prodromou's to
lead aerodynamics,
and Marshall's to
translate those ideas
into a working F1 car.

Success, though, is relative. McLaren already had a performance gap to Red Bull to close, and its nervousness stems from the fact that Red Bull stopped developing its car relatively early in 2023. Stella's assumption is that the champion team made a calculation that its advantage was so great that it could afford to switch to 2024 design early. And it's what Red Bull

might have achieved in doing so that is causing concern.

"The question is:
'Have they cashed
in, accumulated
developments, and
capitalised on that
with this year's car?'
This is my theory,"
Stella says.

"I can't think that Red Bull were not in condition to develop their car. They might have decided not to deliver upgrades, but certainly this may mean their gradient kept going.

"Red Bull should be extremely competitive and we'll see where we are and what kind of challenge we'll be able to set on track." second half as he found his feet.

The gap did come down, but still Norris outqualified Piastri 9-6 from Silverstone onwards, and the average gap reduced only slightly, to 0.146secs, which includes the times when Norris messed up and qualified behind Piastri when he should have been ahead.

So perhaps it's no surprise that Stella sees their competitive situation in only a positive light.

"The relationship between Lando and Oscar is a point of strength of our team," Stella says. "Being Lando's team-mate is enjoyable, because we've seen this kind of relationship already with Daniel, and Carlos, so I would like to recognise and acknowledge how much Lando creates the condition for creating a fruitful relationship that supports the team and the progression of both drivers.

"Oscar came with similar characteristics. So, with the natural process of knowing each other, we can see this has created a very functional collaboration between the two drivers."

Stella says that far from creating jealousy or tension between the two men, success for one only acts as a spur for the other.

Asked whether it would cause problems for McLaren if Piastri were the driver who took its first win this season rather than Norris, Stella says: "I look forward to Oscar getting his first victory. It would be an incredible result considering what we've seen last year with Red Bull when there really wasn't much space left for anybody else.

"If we had a victory by Oscar, it would be an incredible emotion, and it would be an incredible





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emotion for Lando as well because it means we have a car that can win races.

"If I project myself for a second in Lando's head, I would recognise how fair a competitor he is. He is a very fair person and he would ask himself, 'What do I need to do better to do the same as Oscar has been able to do?"

SOME GREAT REWARD

The heat is taken out of any intra-team rivalry to a degree when the rewards are relatively small, so Verstappen's domination of F1 last year meant Norris and Piastri could get to know each other with relatively reduced pressure. It remains to be seen whether that is still the case in 2024. Whatever the car's performance, there is always something at stake. Primarily, pride, the knowledge that you're the faster driver in the team rather than your team-mate. And with that comes status – both inside the team and without.

Right now, Norris is undoubtedly the main man at McLaren, but Piastri has given notice of intent. And so impressive was his debut season that by the summer McLaren had exercised an option in his contract to keep him until the end of 2026. That committed him to the team a year longer than Norris, who at that point still had two years left on his contract — until McLaren moved to extend it (see sidebar).

For now, though, the focus at McLaren is on building on the progress the team made so

Piastri pushed Norris hard in 2023 and took the team's only win, in the Qatar sprint event (below). Norris remains on Red Bull's radar (right)

THE PULL OF THE BULL

Lando Norris has been on Red Bull's radar for several years, and Sergio Pérez's struggles made an approach by the world champion team a real possibility, even though until recently Norris was under contract to McLaren until the end of 2025.

Little wonder
McLaren CEO Zak
Brown made the
relatively unusual
move of tying up an
extension, believed
to be two further
years, now rather
than waiting for
Milton Keynes to try
to whistle his driver
out from under him.
Red Bull wants
Pérez to act as

Max Verstappen and to see him improve his qualifying. If he can't, Red Bull will look for an alternative.

This will involve looking outside the fold, too. It's clear the decision-makers don't consider Yuki Tsunoda to be a Red Bull Racing driver. So if Daniel Ricciardo wants his old seat back, he will have to convincingly beat the Japanese. Liam Lawson, after making his debut at Red Bull's second-string team, is just too raw.

For Norris, the decision was more than over which team he thinks is likely to give him the best car. He will have

considered whether a team so focused on Max would be right for him.

Brown, therefore, focused on painting McLaren as Lando's best option. He says his approach to any employee is "for them to want to be at McLaren, so I tend to focus on making sure McLaren is the best environment and people want to be with us because you can't control external approaches.

"I'm very confident in the relationship we have with Lando."

On the contract extension, Brown said: "I'm delighted we're continuing our relationship with Lando for multiple years to come. It's been a fantastic journey over the past six years, and he has shown fantastic commitment and desire to push the team forward and get McLaren back to the front of the grid.'



impressively through 2023 and trying to gain enough ground to challenge Red Bull.

effective support for

Norris said towards the end of last year: "We've taken some massive steps forward. Considering we're talking about fighting the Red Bull, we're talking about one of the best

drivers in Formula 1 ever, in one of the most dominating cars. And for us to go from where we were in Bahrain to getting close and talking about fighting a Red Bull I think are very good signs for us.

"We know we still have plenty more things to come. So I'm excited and I believe we can do it as a team."

Stella, meanwhile, says that long-awaited first victory for Norris is simply a matter of McLaren providing him the car to do it.

"At the moment, the main reason why it hasn't been possible is we haven't put Lando in condition to consistently compete for the victory," Stella says. "So when he wins his first race, it will be a beautiful moment.

"He is ready for that. It's more about us delivering the car that allows him to take the opportunities. At the moment, we've been leading races, even last year more than once, but we couldn't consolidate this result up to the chequered flag.

"We were very impressed how he was leading the races. We gave everything we could. Brazil, just a few more tenths in the car and the victory would have come home. We look forward to it and hopefully will have the condition in 2024."

Andrew Benson is BBC Sport's chief F1 writer





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THE CLASS OF CONTRACTOR OF CON



Until Lewis Hamilton dropped his Ferrari bombshell the driver market was looking a bit staid. The 20 drivers who finished 2023 are in the same seats for 2024. That's not rare, it's unique. Why is that and what intrigue remains for '25?

WORDS MATT YOUSON



Lawson did a great job standing in for Ricciardo for four races last year but there remains no seat for him

Drugovich, the 2022 F2 champion, has tested for Aston but a path into F1 seems unlikely at the moment



Behold! The new season is upon us. Time for *GP Racing* to deploy well-honed analytical skills, scrutinise driver moves, evaluate rookies' junior records and prognosticate on the risks teams are taking with new hires. Only we can't. Conservatism has swept the paddock, with every team retaining the pairing that finished 2023.

Remarkably this is the first time these circumstances have come about since the world championship began in 1950.

Were F1 powered by rainbows and fairy dust, one might assume a joyful inertia had taken hold: 20 drivers doing a bang-up job, teams thrilled to have them. The realities are a little more complex. Not everyone covered themselves in glory during 2023, and some movement was to be expected – but nothing happened. Musical chairs without the music. Just one of those things? A statistical fluke? Well, no, not really.

This Is Season 2023b

The FIA has taken a rare break from tweaking the technical regulations between seasons. While that won't necessarily stop all 10 teams reinventing the wheel, it does mean there isn't going to be anything outlandishly different on the grid in 2024. Pirelli certainly hopes not – it's planning to bring the same family of tyres as last year.

This, combined with winter testing being a blink-and-you'll-miss-it gambol around Sakhir, makes continuity quite attractive. It would be mid-season before a rookie figured out how to extract the maximum – while a retained driver should be hitting his straps before the Bahraini bagpipers have inserted their reeds. Unless you had a lightspeed replacement lined up, change was going to hurt.

Formula 2 Isn't Cutting It

Part of the problem – if, indeed, it is a problem – is that Formula 2 offers no one with their hand in the air, screaming 'pick me, pick me!' F2's last two champions, Felipe Drugovich and Théo Pourchaire, were both third-season veterans, and that doesn't light any fires. It might seem

unfair on two decent pedallers who, in a just world, would have been handed their shot — but compare and contrast with the way in which rookie champions Charles Leclerc and George Russell were ushered immediately into F1 seats, or the tug-of-love that had Oscar Piastri fending off unwanted suitors with the proverbial ordure-encrusted stick.

Rookies of that calibre don't even have to win. Lando Norris and Alex Albon did enough to warrant their advancement along with Russell, because 2018 was recognised as a vintage year for F2. Recent seasons have been more of a table wine. And, while Mercedes has been incubating the talented Andrea Kimi Antonelli – who'll be joining F2 this year – it was significant that Merc boss Toto Wolff diplomatically changed the subject when pressed on whether Antonelli could be a candidate for Lewis Hamilton's seat in 2025.

It's not just the absence of a Next Big Thing. The F2 chassis and its GP2 predecessor have always aimed to have a degree of F1 relevancy in line with its status as F1's finishing school – but the series sweats its assets over many years of use. There's a new chassis for 2024, having finally

retired the superannuated Dallara F2/2018 – but the car that did a decent job of delivering F1-ish performance for Russell, Norris, Albon *et al* back in the day, now seems light years away from the ground-effect monsters of the current F1 regs. Moving up to F1 is supposed to be a big step: it isn't supposed to be a yawning chasm.

Mexican Stand-Off

Speaking of yawning chasms, the gap between Max Verstappen and team-mate Sergio Pérez makes their continuing partnership 2024's most surprising line-up — at least if you take uninformed, ill-conceived message-board hatred as a useful metric. Red Bull found itself in the always-awkward position of having five drivers for four seats after Liam Lawson did a tidy job subbing for Daniel Ricciardo. Historically, this would have been bad news for whichever Red Bull driver was currently tanking.

Defenders of Pérez would point out he finished second in the drivers' championship, bagged a couple of victories, and contributed to a recordbreaking points haul that would have been enough to win two constructors' championships. They also – and with rather more vim – would argue the problem is Verstappen. Pérez couldn't live with him in 2023, but would anyone else? Pérez is out of contract at the end of this year, there's a seat up for grabs in 2025, it's likely to be a highly competitive one... and yet the pretenders to Verstappen's crown all seem very busy committing themselves elsewhere.

As for Red Bull, it's worth asking the question: does it need the hassle of a new line-up? Fans might mutter darkly about the excruciating tedium another year of Verstappen hegemony will bring, but this is largely a problem for the other teams to fix. Red Bull has experience of chasing victories and championships with drivers at each other's throats and it's exhausting.

The Verstappen-Pérez partnership might be about as exciting as a warm drink at bedtime...



More titles in 2023 means the Pérez and Verstappen pairing is still working, so is a change needed?

but, given the choice of being tucked up with a mug of Horlicks, or being repeatedly hit over the head with a blunt Mark Webber, Red Bull can spot an easy option.

Not In The Middle Of A Chain Reaction

Had Red Bull been shopping around for a Pérez replacement, that may have started the dominoes falling. Not, admittedly, if it simply shuffled its roster, but certainly if it had looked beyond the stable and moved for Lando Norris, or dragged Carlos Sainz or Alex Albon back in. Inertia at the other big teams had the same dampening effect: had Lewis Hamilton called it a day rather than signing a new contract – albeit one with an early exit clause – that would likely have triggered a sequence of moves. Instead, Ferrari signed Charles Leclerc up until the dawn of the next decade (if speculation in Italy is to be believed)

Lando Norris into a similarly vague "multiyear" deal beyond his current end-of-2025 contract – believed to be a response to Red Bull sniffing around.

and McLaren tied

Both these drivers were seen as

candidates to replace Hamilton if he walked. Now neither are available for 2025, much to Wolff's chagrin ("The timing here bit us a bit," he mused in his post-bombshell press conference).

Absent an agent of chaos further up the grid, there wasn't really a catalyst for change further down. If smugness could be converted to horsepower, McLaren would be a good bet for pole in Bahrain, with the long-term futures



Leclerc (2017) and Russell (2018) were both F2 champions who quickly found F1 seats following their success in the series

of Norris and Piastri secured. At Alpine, the close rivalry and forced civility of the Ocon-Gasly partnership is a handy distraction from the under-funded chaos of Enstone, and Sauber doesn't seem inclined to rock its landlocked boat

before Audi starts calling the shots.

One might assume the team holding the wooden spoon would be inclined to seek change. But it's tough to imagine a situation where

there's a reasonably priced pairing more likely than Magnussen and Hülkenberg to help Haas up from the foot of the table.

Over at Aston Martin, rumours of Lance Stroll's desire to swap F1 for professional tennis had the rare consequence of dragging Stroll out of his usual press conference torpor. Lance isn't the first driver put to bed by Fernando Alonso, just the first who knows he isn't about to be replaced



Alonso and Stroll. Although Alonso annihilated his team-mate in 2023, it will be Stroll's decision if and when he leaves F1, and no-one else's

by someone quicker and more reliable – but all that means on a week-to-week basis is that the punishment beatings will continue. Add-in Stroll's default aura of Bassett Hound ennui, and the desire to construct a graceful exit strategy feels almost like a sympathy vote from the internet. The kernel of truth within the rumour is the acknowledgement that Lance will depart at the time of his choosing.

And this leaves Williams. Logan Sargeant's late confirmation for 2024 came from Williams' desire to see a full season of data before pushing the button. In the data-driven, tech-bro world of James Vowles, this sounds more plausible than it would coming from the mouth of any other team principal – but would Williams have made a different decision with more options available? It's a moot point because there weren't many. Mick Schumacher and Drugovich were mentioned in dispatches but ultimately it's a stretch to assume either would be able to come in cold and out-perform a driver that's had a year at Grove, understands the team and the car, and has grasped the correct way to pronounce 'scone'.

Under these circumstances, change seems like far too much hassle. Unless, as with Toto Wolff, it's been forced upon you...



LANCE ISN'T THE FIRST DRIVER PUT

TO BED BY FERNANDO ALONSO, JUST

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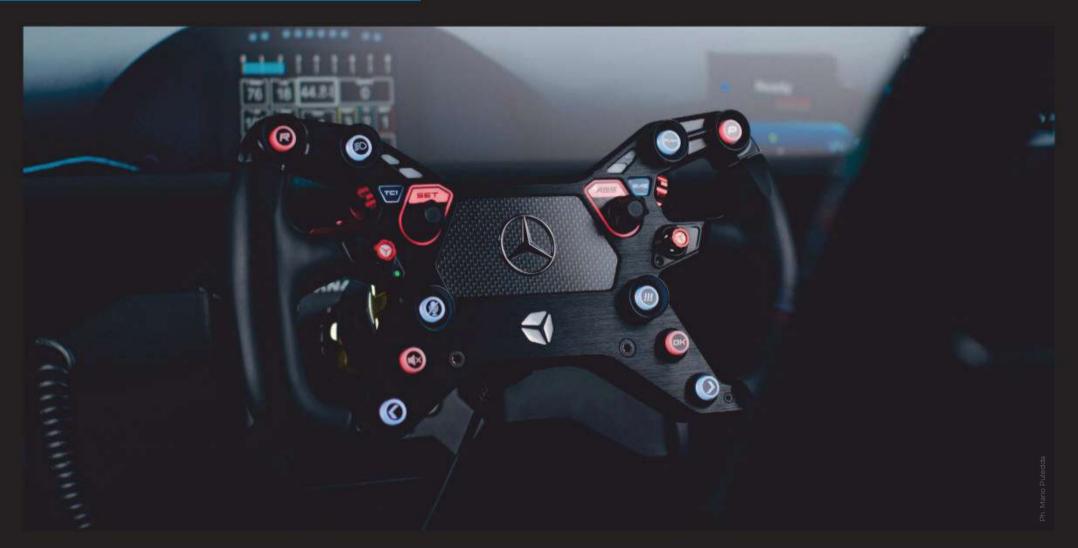
ABOUT TO BE REPLACED BY SOMEONE

QUICKER AND MORE RELIABLE

McLaren sees Norris and Piastri as its future, having battled hard to get hold of Oscar in the first place and signing Lando to a long-term deal



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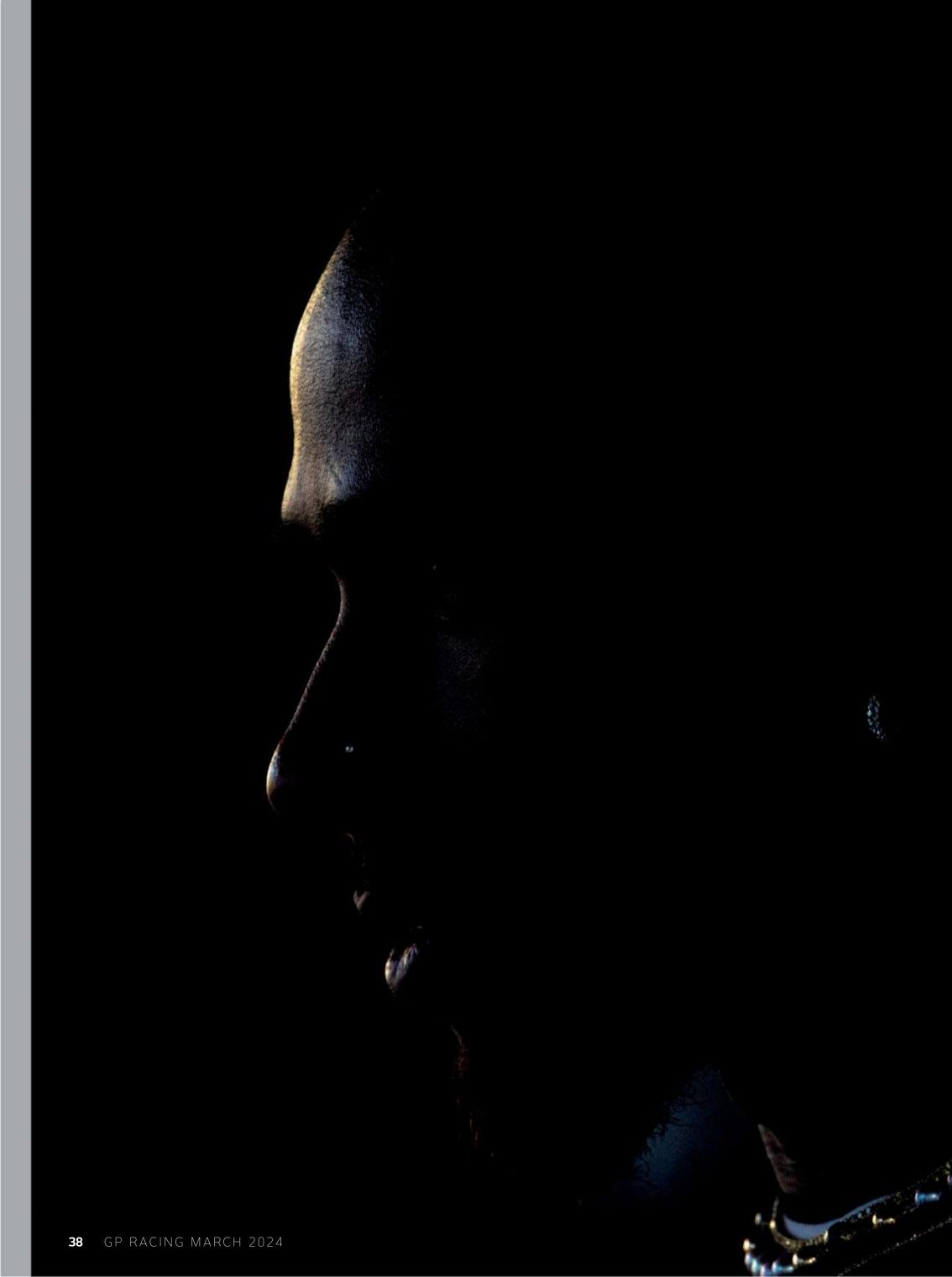
To commemorate AMG's 55th anniversary, Cube Controls designed and produced steering wheels that were made for the Mercedes-AMG Track Series and GT2.











STEPPING OUT OF HIS SHADOW

It's already one of the tastiest driver pairings on the grid.
Now the rivalry between Lewis
Hamilton and
George Russell is set to step up a gear since each has a big point to prove in the coming season...



he 2023 and 2016 Formula 1 seasons share a notable aspect: in win-percentage terms a single team in each – Red Bull and Mercedes at 95.5% and 90.5% respectively – achieved dominance comparable with McLaren's 93.8% strangling of the 1988 campaign.

But surely for all apart from the most ardent of Max Verstappen fans, last season offered precious little intrigue. With no title battle beyond the early rounds of a very long season, it became historically repetitive.

The 2016 campaign isn't viewed as such – even though by then plenty of fans were tiring of Mercedes' dominance. This is because, unlike Sergio Pérez's short-lived challenge to Verstappen last year, both drivers from the Silver Arrows squad had a shot at title glory. Lewis Hamilton versus Nico Rosberg was compulsive viewing.

The Hamilton/Rosberg battle had so much needle – including internecine contact – that what followed when Rosberg retired and was replaced by Valtteri Bottas could never achieve such billing. Indeed, reducing internal tensions and stabilising the Mercedes ship was the priority of team boss Toto Wolff when he gave Bottas the nod. Five seasons of relative calm ensued as Bottas mostly performed the role of compliant number two.

Valtteri's replacement, George Russell, is an altogether different prospect.

There's not been the same levels of palpable hostility as the Rosberg years – Hamilton and Russell have only shared one podium when Mercedes has been victorious, reducing the

opportunities for public displays of cap-throwing pettiness/glorious shithousery (delete as you see fit) – but Russell is unafraid to take his shot against Hamilton. The heir is already taking on the incumbent star. Now Hamilton is set to head to Ferrari for 2025, Russell is already anointed as Mercedes' new team-leader-in-waiting.

The stakes are getting higher

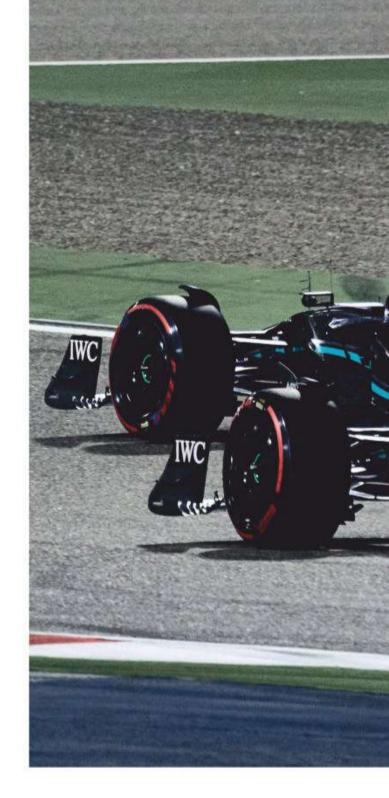
Now, it wasn't quite the same as Barcelona 2016, but the intra-Mercedes crash in the 2023 Qatar Grand Prix put what's now the Black Arrows squad on similarly uncomfortable ground.

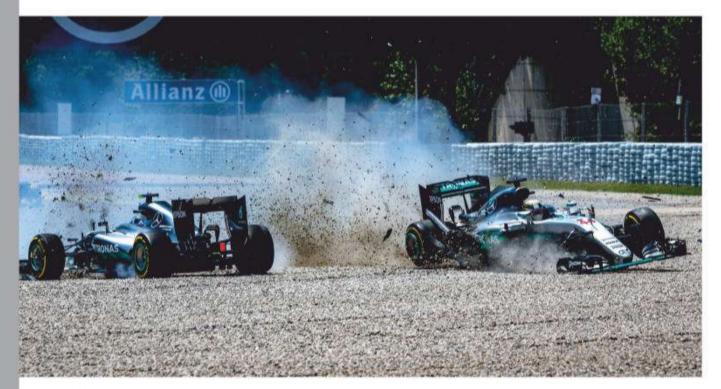
The incident followed Hamilton and Russell's Suzuka battle in which both went briefly off the road, and two bizarre instances of Mercedes pitwall miscommunications in qualifying that nearly led to its drivers colliding at Barcelona, then getting in each other's way in the Spa sprint shootout. At Suzuka Russell practically snarled: "Who are we trying to fight here – each other or the others?"

And all this in a year where, really, Mercedes had no chance of title glory.

Amongst all the predictable expectation-management hot air ahead of this season, something else is discernible: hope. For many fans, it's the hope that Verstappen's supremacy will be challenged and a repeat of 2021's epic realised. For Mercedes, the hope is that it will be the team which provides such a test. And if that hope does become reality, the Hamilton/Russell rivalry automatically acquires fresh meaning – especially since the dynamic will change, given Hamilton's departure.

But even if Mercedes' W15 falls short of





If the new car is able to compete on a regular basis with Red Bull, Mercedes will be anxious to avoid a repeat of 2016 when Hamilton and Rosberg battled messily for the title

providing the platform to embark on such a challenge, the upcoming season will be an important chapter in both drivers' careers. For Hamilton, that yearning for a Mercedes resurgence is even more critically tied to his own chances of taking back the crown before he departs.

Late in 2023, he was describing that year and the one before in these terms: "We were not fighting for a championship, so it was all about discovery." This was because he and Mercedes were "erratic" – devoting much time to setup experiments in the hope of understanding and debugging the W13's awkward combination of porpoising and bouncing. It took rather too long to learn that one was separate from, if related to, the other.

Last season was another write-off and the team acknowledged as much before the first race in Bahrain. Hamilton dedicated himself to spending "more time at the factory,



The young pretender leads the master in the first race of 2023. Unfortunately for both drivers the season was another where they were treading water and unable to compete for victories

although Hamilton was fortunate to escape going off in the Zandvoort rain and things got a bit scrappy in Las Vegas.

Holding back the years

Such consistent excellence remains a valuable faculty for a driver now set to race on into his 40s – assuming nothing untoward prevents Hamilton making his third fresh F1 start at Ferrari. He had said "I honestly hope I'm not racing at 40" back in 2021, but now he feels very differently – Ferrari having offered him the long-term contract he desired, when Mercedes

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having meetings with all of the key heads of the different departments and trying to keep them positive". He now admits to "frustrations" after he'd "asked for certain changes and they clearly weren't done".

Insiders say those "certain changes" amounted to the abandonment of the 'Zeropod' aerodynamic concept that Mercedes adopted with the W13 and maintained with the W14. Belatedly Hamilton got his way and the car was then redesigned with Red Bull-style downwashing sidepods. Despite the inherent compromise this involved, Hamilton was able to do "a lot less of that experimental stuff" – and he ended 2023 more consistent overall and "really happy through the year" with "my race craft and race pace".

This is backed up in his results, which for a good while had him threatening Pérez's second place behind Verstappen in the final standings. Only that Qatar crash stood out as a major error,



The issue of supremacy has yet to be fully tested. Only once have Hamilton and Russell, as Mercedes drivers, been on a podium together where one of them has won, in Brazil 2022

could not. Hamilton acknowledges he draws inspiration from his great rival, Fernando Alonso, excelling still at the top level.

"What you've got to learn is you should never say never", Hamilton says of racing into his 40s. "But at that point [2021], I definitely didn't think I'd be continuing. They are frickin' long seasons. It's a long time away from everyone. I've been doing it 16 years. It's gruelling."

To mitigate these negatives, Hamilton deploys various tactics that mean "I feel great in my body". Each winter he takes a dedicated period to reset from the season just gone and get revitalised for the one upcoming. After his bitter outcome in the 2021 battle, he went to Hawaii with his family, where he considered retirement before concluding: "I just wanted to get up again and keep going".

At that stage he enacted a complete social media blackout, which he replicated to a lesser extent during the winter now ending. Even in what is a valuable element of Lewis's business life, he clearly aims to shut out the noise as much as possible during this period of reflection. And we now know he used this time to weigh up the merits of Ferrari's offer.

On the training front, Hamilton's "meticulous" approach to his diet and tweaking and improving his fitness regimes must combine as his driving career stretches on. Alonso has been open about having to adapt his training to account for ageing, while Hamilton takes additional inspiration from his acquaintance Tom Brady — who succeeded in such a brutal world as the NFL in his mid-40s in large part thanks to his relentless focus on keeping his body healthy.

At the same time, dedicated mental emphasis on upcoming goals is just as valuable to Hamilton at this stage of his F1 career.

He says he's still driven by "the dream of standing on the top step" again and seeing Mercedes succeed at the same time. But he also wants to expand his Mission 44 initiative to improve diversity in motorsport. Inspiring the next generation of black athletes or any other role in sport is clearly a powerful motivation and Hamilton, who admits he's "got to raise more money" to achieve Mission 44's aim, is no doubt also aware that his messages carry more power if he stays active and visible. The Ferrari move provides fresh impetus for this.

There were a few elements of 2023 Hamilton surely won't want to repeat. Ahead of the second round, it was announced that he and long-time trainer Angela Cullen had split. This was announced in amicable terms and Hamilton now says, "I've got a better team around me than ever before". but it was a sudden development and any change to a driver's





Russell started the year very well compared with Hamilton, and indeed led in Australia, but did make a few unforced errors as the season progressed. An off in Canada was the first



close working unit requires time to adjust. His long-time associate, Marc Hynes, is now back in his camp, while he's ended his agreement with management company Copper.

Could it be magic?

Ultimately, as a seven-time world champion, Hamilton seeks "the magic" where "everything comes together, the car and you, and you get that spark [that's] extraordinary". Russell heads into 2024 not only trying to locate that sweet spot but restoring his reputation in some quarters.

After a brilliant start to 2023, where Russell had outshone Hamilton in qualifying, led brilliantly in Melbourne before the first red flag, and been waved through by his soon-to-be-ex team-mate in Miami, George had a run of seemingly careless crashes. In Canada he went off solo, on the last lap in Singapore he clouted the wall while hustling, then in Las Vegas he turned-in on Verstappen.

He puts those high-profile errors down to "purposely trying to push myself further and beyond". So he too headed into the offseason targeting a "reset" after "probably the toughest season I've ever had psychologically – bouncing back from missed opportunities, missed results, mistakes".

But for 26-year-old Russell, those clashes with Hamilton over on-track real estate in 2023 come from a positive position.

"I think it's normal when you're so close in performance," George explains. "When you're lapping at the same [pace] or you're starting next to one another on the grid, you're always going to be close."

The extent to which this is a positive will likely be redefined if Mercedes can somehow launch back into title contention against Red Bull this year. These hopes have been invigorated by technical director James Allison – now also tied to a fresh long-term contract – recently suggesting Red Bull's design path may lead to "gains getting more and more asymptotic".

Allison's theory is that car performance in F1's ground-effect era is inherently more limited,

whereas under the previous regulations there was always more to be found – provided a team had the money to spend. Matched against that is the knowledge Verstappen's squad did not bring many upgrades across 2023 overall and could easily have been holding back ahead of a bigger step this season.

Russell will be the most exposed if Mercedes has a car worthy of the championship, since he's the one unproven at such a level. But to dismiss his chances misses the lessons from his rise to this point – he's such a determined character. This is evidenced in his high expectations of his junior formula squads and regular radio questioning over strategy calls at a team as well-drilled as Mercedes.

Of these, Russell had come into 2023 wondering if he might be best toning such messages down. But, in any case, his spare capacity at speed is an attribute all greats share.

One area in which he falls short of Hamilton is in-race tyre management prowess. Too often he goes off too hard and pays a price over the longer stints – as in that late Singapore GP charge last year. With an 11-11 2023 qualifying record against a driver who has 104 F1 poles to his credit, overall speed clearly isn't Russell's problem.

Pressure from above

But there's one final figure central to this nearly complete tale of team-mates: Mercedes motorsport boss Toto Wolff.

The Austrian has a new three-year contract as F1 team principal with no performance clauses contained within. The announcement of it via the *Daily Telegraph* newspaper suggests this was more to do with image presentation and the importance of minimising disruption that is imperative to any successful operation.



Lewis and George with Toto Wolff (and Bradley Lord). Wolff will be challenged as much as the drivers if the new car is up to scratch



CAR-MAGEDDON

Two weekends in Bahrain demonstrated Mercedes' 2023 campaign was effectively over. Over the pre-season test and opening round it became clear that persevering with the concept initially set out in 2022's W13 – 'zeropods' and all – was never going to match what Red Bull had established as class-leading. Thanks to the cost cap's restrictions, Mercedes was stuck – set on a year-long misery path.

That was how team boss
Toto Wolff and seven-time
world champion driver Lewis
Hamilton felt about 2023,
given how they lamented
Mercedes' entrenched
position as a non-winner.

Mercedes therefore
heads into 2024 knowing it
has much to gain through
a fully realised car-concept
change. There is none of
the misplaced confidence
that permeated the winter
of 2022-23, born of George
Russell's Brazil victories. Merc
can take inspiration from Red
Bull's steamrolling success
with the downwash concept
it finally joined at Monaco.

It also doesn't have to maintain the ride height compromises it ended up with on the W14 – a car it tried to optimise aerodynamically for higher ride heights after the bouncing and porpoising issues which afflicted the early iteration of the W13.

There will be big interest in how it approaches suspension layout in 2024. Red Bull has established the performance value of a stable, benign platform; under the cost cap, Mercedes couldn't simply copy this in-season because it would involve far-reaching change.

Hamilton also asked for the W15's cockpit to be shifted backwards, having felt the W14's compromised his feel for car movement. Mercedes also recognised its 2023 DRS effectiveness was held back by the initial zeropod car layout. It's targeting different potential gains via enhanced pitstop kit and procedures, too.

After all, he co-owns the squad and was hardly likely to sack himself – even after Mercedes' first winless season since 2011.

Wolff elevated Russell to race alongside Hamilton after a two-year stint as a Mercedes junior and three seasons learning F1 at Williams. The scenario playing out now is Wolff's to own. So too, ultimately, is Hamilton's departure.

Having let Esteban Ocon head to Alpine/

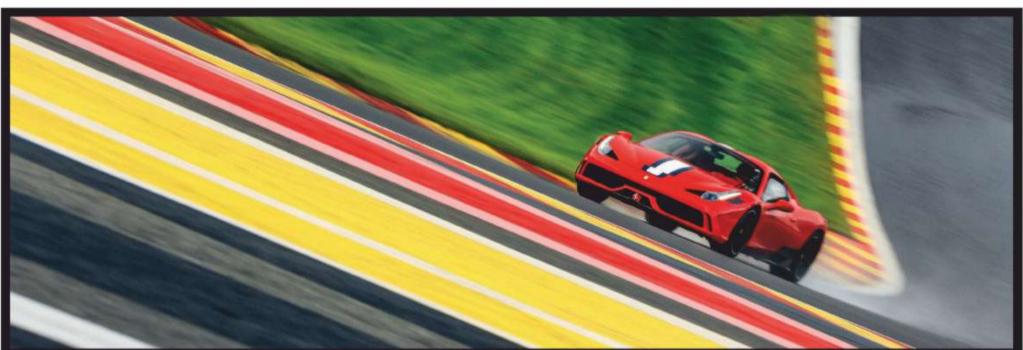
Renault back in 2020, there is no obvious candidate to replace either Mercedes incumbent. Its latest fast-rising junior — Kimi Antonelli — is making waves in the lower formulae but, now he's set to race for Prema Racing in Formula 2, his momentum must remain if he is to earn a future F1 elevation, which surely would be at a smaller team. Such opportunities are harder for works squads to find now even the independent teams are more financially healthy — but with Mercedes' former strategy chief James Vowles now running Williams and Alex Albon likely possessing the final-year option in his contract covering 2025, perhaps an arrangement that suits all parties can be made?

If Mercedes is to turn its fortunes around as it desires, avoiding the internecine warfare it has previously experienced is a must.

And that, given the characters involved – and with Hamilton heading off – is one of Wolff's challenges for 2024 even if the W15 isn't up to scratch. But the car challenge is the greater importance, which is why Hamilton says in pressure terms there's a "huge amount, for sure" on his boss right now.

Handily for Wolff, Hamilton is clear that for everyone at Mercedes – including himself and Russell – that's the case "not just [for] Toto, but globally, all of us..."

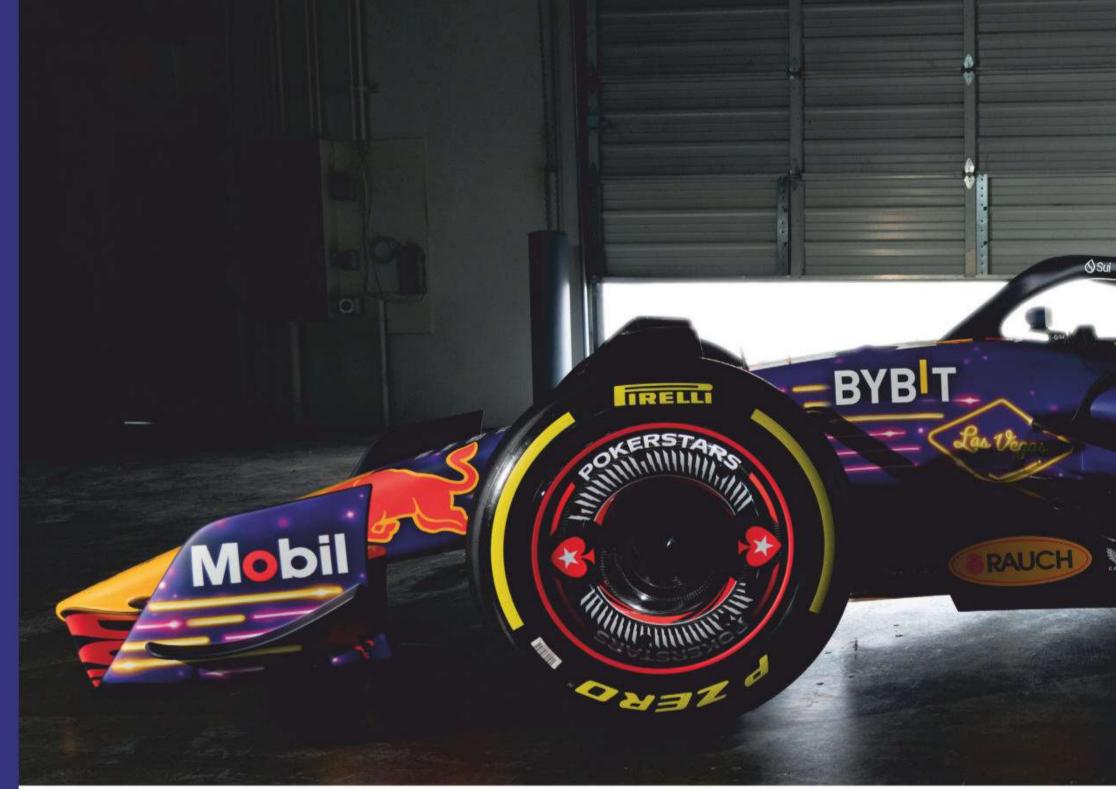




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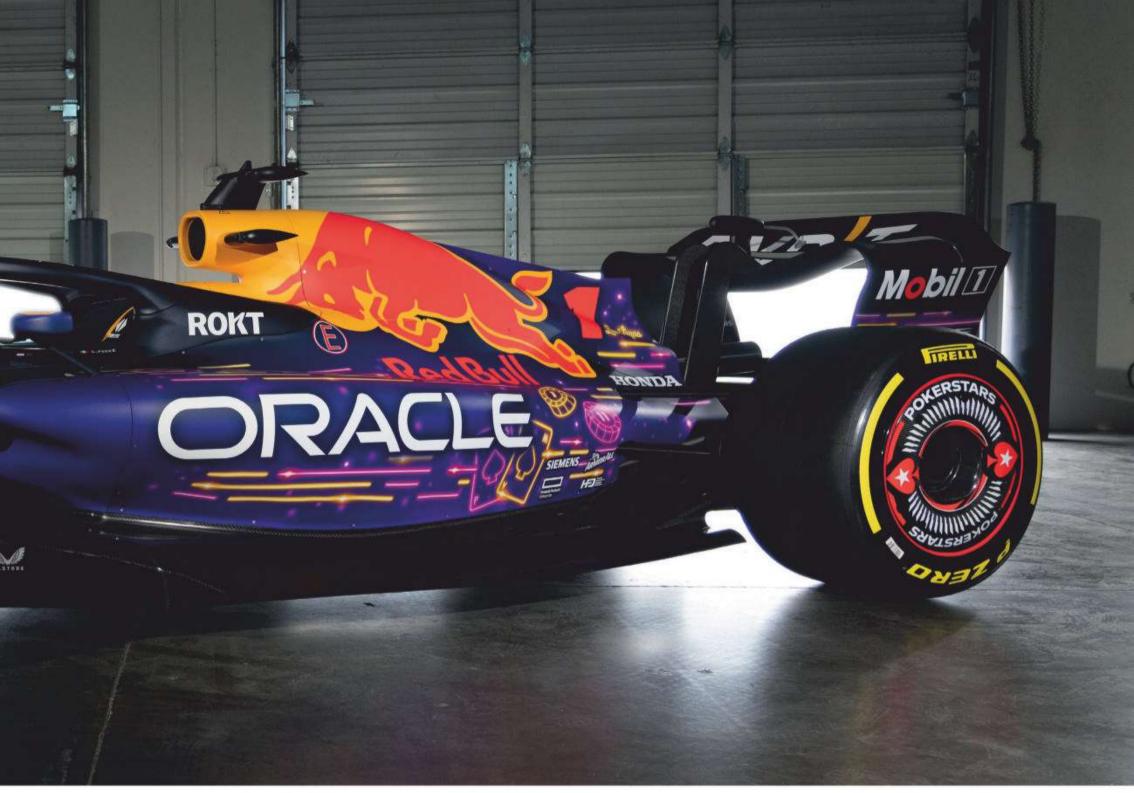
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THE IMITATION GAME LHE IMITATION GAME

"Convergence" – a bland euphemism for the rest of the grid essentially copying the features of the fastest car. We've already seen the signs as Formula 1's ground-effect ruleset matures. But as several competitors have already discovered, copying Red Bull doesn't guarantee success...

WORDS STUART CODLING





The all-conquering RB19 (above). McLaren (right) was the only other team apart from Red Bull to run pullrod front suspension in 2023



ONE OF THE KEY WORDS BANDIED

around at the dawn of Formula 1's second ground-effect era was "revolution". Appropriate enough at the time as the stakeholders chased a dream of an action-packed future in which a new emphasis on underbody aerodynamics would banish processional racing. Less so now as design orthodoxy naturally coalesces around the most successful solution: Red Bull's record-breaking RB19.

It's understandable given the major inputs into such decisions: the sheer margin of Red Bull's dominance in 2023; the existence of a cost cap which naturally restricts experimentation; and the fact that the next rules reset is two seasons away.

In 2008 Honda had three different design teams spitballing ideas in separate windtunnels for the incoming '09 ruleset and the result was dominance (even if Honda didn't get to enjoy it after panic-selling the team for £1 as the global financial crisis gripped). But we're not in Kansas anymore. Increasingly, pragmatism trumps originality in contemporary F1. In what's now a rigidly cost-controlled environment, thanks to the budget cap, a team that has gone down a dead-end development path cannot simply spend their way out of it.

This has led to a more gradual convergence than would have been the case in the freespending era around what Red Bull has proved to be a winning formula. It's also meant teams which have pivoted mid-season in key aerodynamic areas – and that is most of them, from Mercedes through to Haas – have found adopting, say, the 'downwash' sidepod configuration doesn't immediately unlock laptime.

In fact, both of the teams mentioned above – Mercedes in Monaco last year, Haas in Austin – found that applying what the media habitually describes as 'upgrades' didn't yield an instant uptick in performance. While this appeared to come as a surprise to the American team, Mercedes' reflection upon it is suitably nuanced.

"The change to the sidepod fronts were, 'let's just not have that as a thing to worry about for the future," explained technical director James Allison in a post-season media briefing.



THE HEIGHT OF THE MATTER

Under F1's previous ruleset, rear ride height varied from 120mm to 140mm for the most extreme 'high-rake' designs.

Now most cars operate in a narrow window around 60mm.

The science is simple: air passing at high speed under the car and through the twin venturi is generating a lowpressure area, in effect sucking the vehicle towards the ground. But that force will also draw air in from the side of the car, diminishing the suction effect. There is a balance to be struck because, if the car gets too low, the diffuser can stall, setting in motion the cyclical process of porpoising. This is a separate but related problem to the bouncing initiated by a low-riding, stiffly suspended car bottoming out.

With any ground-effect car some porpoising is

inevitable. The skill of the designers and engineers is to make it less like a switch so the car is stable in as many conditions as possible.

Last year the FIA tried to reduce porpoising by reducing overall downforce. A proposal to raise the edges of the floors by 25mm was watered down to 15mm as the majority of teams reduced the impact of the problem by development.

While most teams took this opportunity to run their cars lower, achieving legality by raising the floor at the edge, Mercedes stuck to its late-2022 policy of optimising around a higher ride height, having been forced in that direction while curing the W13's bouncing. While there were reasons for this – most teams agree simulations fall short in predicting bouncing

 Merc quickly realised it was chasing limited gains.

"We placed value on the wrong things," says technical director James Allison. "There was a debate: should we cash in that 15mm and drop the car down, operate in a window that's 15mm smaller because the cars will be less bouncy inherently? Or should we do more of what has done us well over the course of the year [2022], which is force ourselves to keep looking for downforce where it's difficult: high up?"

The mid-season revamp focused on undoing that decision but there were limits to what could be done, given the structural integration of the rear suspension and the gearbox casing. This year's W15 features new front and rear suspension geometry and a new gearbox too.

losses and then find improvements in laptime, even though the shift to the Red Bull-style downwashing sidepods carried inherent compromise because of unchangeable elements of the W14's structure. Fundamentally, while F1's legions of self-appointed tech 'experts' like to point at a particular area of a car and say developments there are worth several tenths of a second, the reality is far more nuanced: any aerodynamic component's value depends on its relationship with the other surfaces of the car, working as a complete system.

"We're always looking at what [other] people are doing," AlphaTauri (now Visa Cash App RB) technical director Jody Egginton told our sister title *Autosport* during a similar post-season explainer. "And it's about bringing all that together and understanding it.

"The downwashing concept, we can all sit there and draw it, it's not a problem. The devil is the detail, and we're moving ourselves forward with lots of small details on the car."

COPYING'S HIDDEN PERILS

All F1 teams employ photographers to spy on the opposition (the FIA, too, routinely commissions such imagery as part of its mandate to ensure regulatory compliance). But while gains were easy to find through copying in bygone decades, increasing aerodynamic sophistication from the 1990s onwards has resulted in outright imitation becoming less useful. A modern F1 car is a complex network of interdependent influences, which is why engineers such as Adrian Newey – rightly lauded for his ability to 'understand' how a car is working – have achieved such success.

Never has this been more true than in the latest ground-effect era where so much is happening underneath the car. The portion of the vehicle we spectators can actually see is merely playing a supporting role – hence the excitement when Sergio Pérez binned his RB19 in Monaco and F1's image artists scrambled to get pictures of its underbody venturi as it was craned away.

To a great extent, then, the fixation with sidepod configurations has been the proverbial red herring. That's why grafting 'downwash' sidepods onto existing designs hasn't necessarily proved transformative: the distribution of surface pressure on the top surface of the floor has to be optimised, and the overall flow must help to build a low-pressure area behind the floor to encourage underbody flow. Generally the gains to be found in the visible areas of the cars were on the front wing and around the ducting for the rear brakes.



Most teams ran cars lower in 2023 (top). Merc didn't until its mid-season revamp, after an initial Monaco upgrade package (above)

"And actually, as part of the overall package of things we put on that car there and then, the decision to go to that new sidepod front probably took about two tenths of a second off the update package we put on the car.

"But we would at least know, from that point forward, that we don't have to fret about that. After a pretty torrid 14 months, we could just take that off the table as a variable, although actually that particular change on that particular day was slower than what preceded it."

Indeed, further optimisation and developments enabled Mercedes to negate those initial



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The other nine teams got an unexpected view of the Red Bull RB19's floor following Sergio Pérez's qualifying accident in Monaco

Equally, while Pérez's stumbles have enabled rivals to get a glimpse of Red Bull's holiest of holies, the floor configuration itself – particularly the 'fences' influencing airflow around the entrances and exits of the underbody venturi – has an interdependent relationship with the upper surfaces *and* with the suspension dynamics. It is well known in the paddock that

one of the key drivers of Red Bull's dominance has been its ability to run the RB18 and RB19 at the low ride heights which maximise the effectiveness of the floor — all the while not falling prey to the porpoising and bouncing which have afflicted other teams trying to run that low.

Thus the rather less sexy topic of suspension design has assumed greater significance. As Pat Symonds explains (see p16), the dynamics of current cars reward stiffness. But there are trade-offs to be made in order to avoid bouncing, because ground-effect cars rely on stability to work across a wide range of corners. Red Bull's

front suspension arrangement drew attention last year since its sophisticated geometry was clearly aimed at reducing dive. McLaren was the only other team to employ pullrods at the front. McLaren, along with Alfa Romeo, Alpine, AlphaTauri and Red Bull ran pushrods rather than pullrods at the rear; at the time of writing, no team has revealed its definitive 2024 designs so it remains to be seen who will change.

The nagging doubt for technical directors not based in Milton Keynes is how much additional performance Red Bull will have discovered, having ended RB19 development early last year. Part of that was driven by the cumulative 'hit' on resource through F1's sliding-scale rubric (which cuts windtunnel time and/or CFD processing for the leading teams) and the penalty for breaching the cost cap. But equally the RB19's dominance made it prudent to withhold new ideas.

There are more positive voices out there. James Allison believes the current rules impose a lower and more defined 'ceiling' so the gaps in performance will become less pronounced.

"If you look at the bigger picture, this is a grid that's gradually compressing," he told media ahead of the new season. "All the cars in Q1 would sort of squash down within one second of each other, and that's not coincidence. It's a trend that has happened from 2022, continued

DOUBLY DEFEATING DRAG

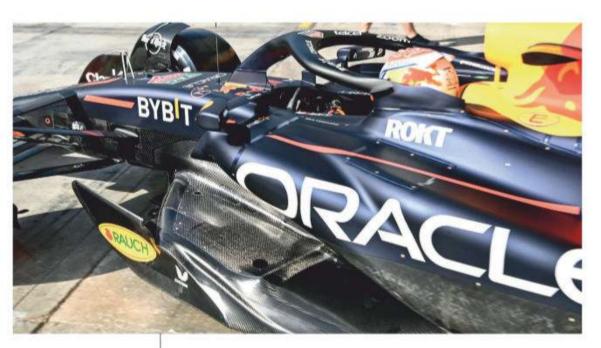
One element of the RB19's superiority which prompted speculation and innuendo early last year, and was only belatedly understood, was its clever rear-wing configuration which will now be widely imitated. To get to that point, of course, other teams had to understand how Red Bull was achieving greater speed boost while the Drag Reduction System was activated, and work out how to incorporate and optimise it within their own overall design concepts.

In isolation, Red Bull's rear

wing works like this: the lower 'beam' wing is slimmer, often one piece while others run twin elements. The upper element which contains the DRS mechanism is larger and contributes more downforce – and, therefore, drag. Thus when the DRS is active the car enjoys a greater drag reduction.

Last season, other teams imitating this configuration found it induced rear-end instability. Red Bull has long since conquered this – but can the others?





Red Bull's sidepods (above) and rear wing (left) both attracted attention in 2023 but just copying them had inherent risks for its rivals in 2023 and I think will continue to show itself in 2024 because the gains are getting more and more asymptotic [ie limited, like prime numbers becoming less common as they grow larger]."

It's for this reason that Pirelli is retaining the same tyre compounds and construction from 2023. After three rounds last year it had to bring forward a development step originally planned for the end of the season.

"I think, therefore, that in addition to us -I hope - having worked well, my guess is it's going to be relatively busier near the top of the grid this time around than last." \bigcirc



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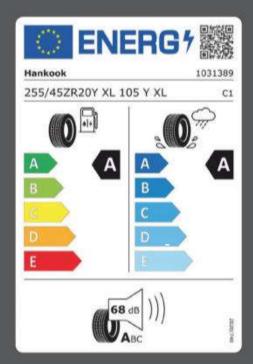
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- The first summer tyre in a new product line, specifically designed for electric vehicles
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- A comparison test performed by TÜV Süd¹ showed that the Hankook iON evo, fitted on current premium electric vehicles, is far superior to conventional tyres, particularly in terms of rolling resistance









* EU label grade varies by size

1) TÜV SÜD Tire Test 2022, Report No. 713252186-BM01, -PM01. Test period March 2022. Test performed on the Hankook Ventus iON S with four competitor tyres, in in the size 245/45 ZR19 102Y XL. Test vehicles: Tesla Model S 85, Tesla Model S P100D, Audi Q5 Sportback 40 TDI, VW Tiguan 2.0 TDI. Test location: IDIADA, Papenburg, Neubiberg, Garching. Applies to all further mentions of the TÜV SÜD Tire Test.



IN CONVERSATION WITH

WORDS STUART CODLING PORTRAIT WILLIAMS

ZAK O'SULLIVAN

The Williams Driver Academy protégé, Aston Martin *Autosport* BRDC Award winner and 2023 F3 runner-up got to test a current Formula 1 car at the end of last season – and is graduating to Formula 2 this season with champion team ART

You won the Aston Martin Autosport BRDC
Award in 2021 – it was you where the presenters had a Terry-Wogan-and-Scooch moment, wasn't it? [Confusion briefly reigned when he was accidentally announced as 'Zak Martin', with the surname of one of the other candidates]
Ha ha! It was – but I was born in 2005 so that reference is a bit obscure for me...

Welcome to *GP Racing!* How valuable to your career was winning AMABA?

Very valuable — and not just in terms of the money [besides a test in an Aston Martin F1 car, the prize includes £200,000 to help fund the next step of the winner's racing career], it's a massive thing to win, because it places your name alongside some of the most successful British racing drivers of the past 30-odd years. It's also a tremendous confidence boost. There's no competition like it — you're on your own with no entourage, and you don't see the other drivers' laptimes. I really enjoyed it because you don't get that kind of experience anywhere else.

You've now had another opportunity to drive an F1 car, this time a current-generation one [O'Sullivan drove the Williams FW45 in FP1 during the Abu Dhabi GP weekend as well as in the post-season test]. How did that go?

Not too bad, there was a lot to learn – it was my first time at Yas Marina so there was a quite a bit of track learning as well. I managed to get on top of it relatively quickly and felt quite comfortable in the car.

There were still a few things to refine, such as low-fuel runs on soft tyres, but I enjoyed it. Any experience in a Formula 1 car is valuable so I tried to make the most of it.

The other young drivers to test were racing in F2 last season, you were in F3 [with Prema, winning four rounds and finishing second in the championship to Gabriel Bortoleto]. How much of a step was it?

It was pretty big, to be honest, especially having not sat in a race car since September [the season finale was at Monza during the Italian GP weekend]. It's a bit of a shock getting back in a car, especially when it's an F1 car. But it wasn't too bad – after a couple of laps you get used to the speed and can start to push towards the limits.

All racing drivers want to be as fast as possible but for me – certainly to begin with – it was about learning the car and some of its quirks, and getting some experience around that circuit since we'll be racing on it in F2.

You seemed to be on the pace pretty quickly. What preparation did you do?

Mainly simulator stuff at Grove [the Williams factory] – but I'm there most weeks doing sim work. And physical training – obviously F3 to F1 is a big step neck-wise, so I was in the gym a lot.

How did the Williams F1 drivers help you – what did Alex [Albon] say before you got in his car?
There were no specifics really, just general advice.

ANY EXPERIENCE IN A FORMULA 1 CAR IS VALUABLE SO I TRIED TO MAKE THE MOST OF IT

He and Logan [Sargeant[have been through the same career steps, F3 and F2, they remember the biggest things when they first jumped in an F1 car. It's very different, faster for sure, but there are a lot more systems, power steering, and a lot of the grip is found in different ways to what you're used to.

In terms of you being part of the Williams Driver Academy, what benchmarks has the team set you? Is there a kind of career road map?

I wouldn't say there's a big expectation on results. It's about performance relative to my team-mate.

I have a strong team-mate in Formula 2 [Alpine Academy driver Victor Martins, 2022 F3 champion and top F2 rookie in 2023] so it's good for me to have that reference. But in terms of position and whatever, I'm less focused on that than I am on the things that are controllable from my end.

That's a very James Vowles outlook on things – an emphasis on process and achievables rather than setting arbitrary goals.

Yes, very much. As soon as you start to look at numbers and stuff, it never really goes too well. So long as I focus on what I think is right, the procedures I think I know, hopefully the results will follow.

With a new Formula 2 car this season there will be a few unknowns...

I'm really looking forward to it. ART won the teams' title last season so I'm going into a strong operation. It's a cool year to start in because the car is new for everyone, it's an unknown apart from three days of testing before the pre-season Bahrain test, which for a rookie is quite nice.



As if being a Formula 1 driver wasn't cool enough... Alpine's Pierre Gasly and Esteban Ocon got to hang out - and have a kickabout - with French footballing legend, World Cup winner and former Real Madrid player and manager Zinedine Zidane. Back of the net!

WORDS OLEG KARPOV PICTURES ALPINE



It's a chilly winter morning. There's a bit of a hustle and bustle outside gate 28 of Madrid's biggest stadium, the legendary Santiago Bernabéu, which is currently being renovated. The presence of a few police cars and TV crews suggests this is no ordinary day. At a quarter to ten, Esteban Ocon pulls up to the entrance to the Real Madrid museum in a green Alpine A110S.

Yet the F1 driver is more of a guest than a protagonist today. A few selfies later, he joins GP Racing in the huddle to wait for an even bigger sports star – the man who, as player and manager, has won four Champions League trophies and three La Liga titles with the team that owns this very stadium. Zinedine Zidane arrives a few minutes later in another A110. The purple hoodie grants him anonymity for only a few seconds. His distinctive look and walk can't be disguised. "Zizou!" shouts a group of teenagers who happen to be nearby and, as he makes his way towards the F1 driver waiting for him no more than a dozen metres away, Zidane manages to attract a swarm of passers-by and random visitors who happened to have bought a ticket to the Real Madrid museum at just the right moment.

The crowd, which also includes

a handful of Alpine junior drivers, effectively 'boxes out' the security guards at the entrance. And Pierre Gasly, who has cut short his holiday to fly to Madrid to meet Zidane, now makes his way through that crowd with a look not dissimilar to that of the schoolboy next to him trying to get a selfie with a legend.

"You know, one of the reasons I chose the number 10 in F1 is because of him," he tells *GP Racing* later.
"I also won the Formula Renault 2.0 title in 2013 with that number, but yeah, as a kid I obviously looked up to Zizou, and when I played football I always wanted to have the number 10 on my back.

"I have a lot of memories of sitting

Gasly, Zidane and Ocon pose with a Alpine F1 car (above. left). Ocon was there to greet Zidane and the green Al10 at the museum (below)



in front of the TV and watching the national team games, and he was the captain for quite a few years.

I have this very clear, actually quite sad image of his last World Cup in 2006. I remember I was in Douvrin for a French championship and

I was watching the final in my caravan with my cousin, who was supporting Italy. France lost and I ended up crying all evening."

Since last year Gasly and Zidane have been colleagues of sorts. The former France captain is now an ambassador for Alpine, overseeing among other things two of the brand's 'racing' projects. One is the Rac(H)er programme, which aims not only to find and bring a female driver into F1 in the foreseeable future but also to "empower women and encourage new generations to join the motorsport industry". The other is the Concours Excellence Mécanique, a competition for mechanics, the winners of which get the chance to do an internship at Viry-Châtillon, where the engines for Alpine's F1 team are built.

It's Zidane's initiative to invite the Alpine family to Madrid after a long racing season – and there's no better way to start the day than with a tour around the Bernabéu.

This is a private visit, so even the cameras have to wait outside - but that hardly gives Zidane a break from being the centre of attention. Shielded by the drivers, he's protected from the constant requests for selfies, but casual visitors to the Real Madrid museum join the tour group when they see one of the

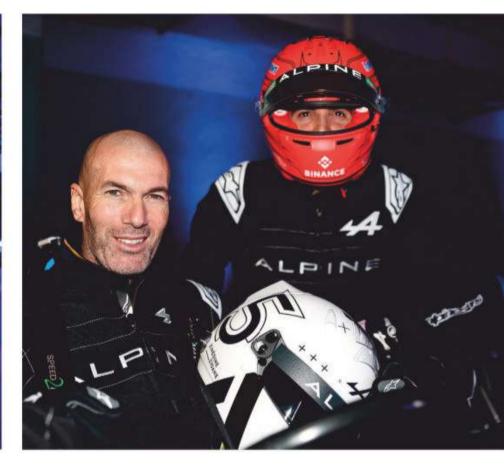
A hotel underground car park allowed the F1 drivers to race with one of their heroes, and some young karters to race with theirs











greatest stars in the team's history, and it grows as they move from one stand to the next. Zidane, completely unfazed by the crowds, listens attentively and courteously to the guide, occasionally supplementing her story with details of his own. The tour ends with a group photo in the stands. But the day is far from over, as the group sets off to the Rosewood Hotel, where a makeshift racetrack awaits.

BORN IN THE GARAGE

Now it looks a lot more like a formal media event. Outside the hotel, Zidane poses for pictures with Ocon, Gasly and the F1 team's sporting director Julian Rouse, members of the Alpine Academy, and those who will remember this day even more vividly: two girls from Alpine's Rac(H)er programme, 15-year-old Lisa Billard and 11-year-old Sukhmani Khera, and two French mechanics, Nicolas Lucien and Achille Thurotte, the winners of the Concours Excellence Mécanique competition.

Zidane shares the ambassadorship of the latter programme with Ocon, who not only helps promote it but is also one of its sponsors. And the way he talks about it, there's no doubt that Esteban, son of a mechanic, is not just doing it to boost his own image.

"I was born in the garage," Ocon tells *GP Racing*. "I used to come home after school and work on cars with my dad. I watched F1 on TV and dreamed about it. But people around me were saying 'it's not for you', 'you'll never get there', 'it's impossible', all those things. In spite of all that, I wanted to get close to that world, to work there – maybe one day – as a mechanic. But there was no clear path.

"I would have dreamed that someone would have guided me, that if there was a competition I would have tried to win it. Instead everyone said 'you'll never make it'. So when the opportunity came up and we had the idea with Alpine to do something like this, I thought: 'We have to make it happen'.

"You know, it's all about equality.
These guys are here on merit,
because they're clearly some of the
best mechanics in the world.
It doesn't matter who you are, where
you come from, what nationality
you are, if you're male or female
– you should have the same
opportunities. If you're passionate,

if you work hard, if you're one of the best, you should make it."

BUT CAN ZIDANE DRIVE?

Next on the agenda is what racing drivers love most. Actual racing. An improvised circuit, laid out with plastic fencing, has been set up in the hotel's underground car park. With neon lights and Alpine cars lined up along the sides, the track looks pretty impressive, but the barriers are perhaps a little less robust than you might expect even at your local arrive-and-drive facility. So before the drivers jump into their go-karts to have a "race" with Zidane, Rouse calls them over to remind them that the main task today is to "have fun" and not to let the red mist descend. It's the youngsters who need a bit of polite instruction. After all, it's not every day they get to share the track with two F1 drivers and a living legend of world sport. "Today isn't important, guys," smiles Ocon. "What's

important is the season ahead."

The instructions hold firm, but only for a few moments. Finishing his first lap, Gasly slowly drives past the TV cameras with his hand in the air, jokingly imitating a victory gesture. But he's almost immediately caught by Kean Nakamura Berta, European and World karting champion and one of the hottest talents of his generation – and even the fact that the electric karts' motors have been turned down doesn't prevent a battle kicking off. The drivers soon catch up with Zidane and, without showing any sign of reverence, start bumping into the back of his kart. Minutes later, there are duels all over the track and some of the plastic barriers are fit only for the recycling bin.

"You tell the drivers not to race, they say 'OK' – and immediately forget about it," Rouse observes, shaking his head.

After the session, Zidane, still in his kart, receives some advice from the two Rac(H)er programme participants, Billard and Khera.

"I told him not to move the steering wheel too much and to

"THE DRIVERS SOON CATCH UP WITH ZIDANE AND, WITHOUT SHOWING ANY SIGN OF REVERENCE, START BUMPING INTO THE BACK OF HIS KART. MINUTES LATER, THERE ARE DUELS ALL OVER THE TRACK"



keep your speed up in the highspeed corners," 11-year-old Sukhmani explains to the select group of media present.

Her slightly older colleague, one of the strongest female karters in Europe, faces questions about the prospect of becoming the first woman in F1 in more than 30 years. Questions she'll probably hear a lot in the coming years. "It's not about gender," Lisa says, "it's about whether you're good enough."

"To answer your question, F1 needs the 20 best drivers in the world," Gasly elucidates. "Whether the 20 best drivers are girls or boys doesn't matter. So it could be that the 20 best are all female.

"What we're trying to do here is give equal opportunities, because we can see it's a very male-dominated sport, and more opportunities are generally given to boys from a younger age. The programme is designed to give these girls the best chance to get the maximum potential out of themselves."



Like both the Alpine F1 drivers, Lisa comes from Normandy – and she's already had a chance to share the track with Ocon on a couple of occasions.

"She has the same coach as we had, me and Pierre," Esteban says. "So she's in good hands. She's training on the same kart track we used to train on, and she's proven she's one of the best in the world. Not in the women's category, but overall, boys and girls, all together. And she's going to keep going.

"When you guys ask these silly

Although a marketing event for Alpine, the day had the added bonus of inspiring and motivating the young drivers who attended

questions, 'when are you going to be in F1?'... Chill! Even when I was young, if somebody asked me that, my dad would say, 'Chill. One step at a time.' That's what Zidane says as well: it's important to focus on what you're doing, not the outcome. That's exactly what we should do with any young athletes. You should not put that negative pressure.

"Like Lisa said, it doesn't matter if you're a girl or a boy. You know, what matters in the end is that you know how talented you are."

Of course, a typical F1 driver's schedule militates against Esteban joining Lisa and other members of the Rac(H)er programme at races or training sessions once the season gets going. And it wouldn't make much sense for Zidane to give the girls racing advice either. But what they can do is set an example and be a source of motivation. The day may







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be a marketing event for Alpine – from a PR point of view, it's essential to have diversity programmes, and it helps a company's image – but if a day like this can also be really inspirational, that's a huge bonus.

STARS IN THEIR EYES

It's football time. The drivers and Zidane, accompanied by members of his family, walk out onto the artificial pitch in front of the hotel.



Time for World Cup winner Zidane to show off some of his neverforgotten skills to the drivers



Noticing that the girls have lingered outside, Zinedine escorts them onto the pitch himself. Now it's his turn to show them the ropes.

Gasly, who now has the chance to play alongside his childhood hero, can't hide his excitement - and even rings his girlfriend to brag about what's about to happen.

"When I was a kid, I never thought I'd have a day like this," he tells *GP Racing* later. "To share the track with Zidane... I mean, it was just super cool! We had a bit of a fight and I even had some

contact with him and we were racing wheel-to-wheel. I hope he's not too sore after the couple of laps we did together! And the football game was just a highlight for me, sharing the pitch with Zizou and actually playing in his team... I just had stars in my eyes."

For Ocon, who's followed Zidane's career since childhood, the trip to Madrid will be no less memorable.

"The thing is, it's not just this meeting," he says before bidding Zidane farewell. "I was with him in Monaco in '22, then at the launch



of our 2023 car, then in Viry for the how to keep the stress level down Concours Excellence Mécanique event. He's someone who is really dedicated to the cause.

"We also had dinner last night. The things we talked about will make me a lot richer, mentally and psychologically. He told me a lot of things about how he keeps calm in certain situations when the pressure is immense, like, you know, a World Cup penalty or something like that,

and focus on the right things. He gave me a lot of different views on that. And those are things I'm definitely going to keep to myself for the future. And that, of course, gives me a mega motivation...

"So, if that is so inspirational for me, imagine what it does for them! A day like this is a huge boost for the boys and the girls, too. That's the most important thing." WILLIAMS / EXPERIENCE CENTRE

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JAMES VOWLES



THINGS I LOVE



The Williams boss on why books beat films, and which music band is the best in the world



Family

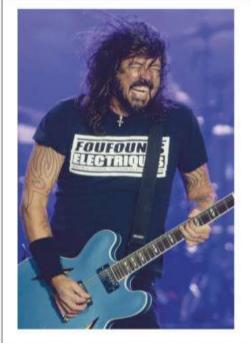
At the top of the list is my immediate family, my partner and my baby daughter. Because they can bring you a level of happiness that so many other things in life can't, and you get it for free. Well, actually that's not true, they're both incredibly expensive, but conceptually that's the love you get for free, every day of your life.



Flying

I fly helicopters. You're by yourself, doing something that no one else does, unless you're a bird. And it gives you a sense of freedom.

And I really like that.



Music

My favourite band is Foo Fighters. I mean, if you're only meant to know one band in the world, it's got to be Foo Fighters – the rest, don't worry about it. But between me and my partner, we listen to everything from classical to rock. You can use it as a distraction or you can use it as something to help you concentrate – it's up to you how you want to use music. What I really enjoy is the fact that a group of creative individuals can take your mind to something completely different.

Technology

But it's not just phones, I love technology in general and I'm always trying to keep up with the latest developments and try to incorporate that into my life. Al is part of that, of course, but it's still underdeveloped. I think there are some really interesting areas there, but I believe technology has to make life better. If it's just shiny lights, it's not enough. Technology has to make your life better.



Adventure

Me and my friends have motorbikes and did a five-day tour around the Alps. There was a competition to see who had the best, let's call it, efficiency in choosing hotels - the ratio of cost to quality. One of us found a decent room for 23 euros, but we're still arguing about it because it was like a hostel. The next night we went to a Michelin-star hotel because he thought, "I'll go for quality and forget about price." It was a fun adventure we still talk about today!



A good book

When you start it, you don't know what's going to happen, and two days later you finish the book and you've been transported to another place. When you read the pages, you have a vision in your mind, you recreate what's going on in your head - and I love that feeling. I much prefer reading a book to watching a film. Because the film is somebody else's vision. The book is mine.



Racing

Racing is what we do for a living. But it's also what I do as a hobby. I race, mainly GT3 cars, and enjoy it. It helps you connect with the drivers because you understand what they're going through. I did a test in Valencia and Turn 1 in a GT3 car is about 220km/h. I hit the brakes and the pedal went to the floor. There was no slowing and I got it under control with a big slide. On the radio I said to my engineer, "The brake pedal went all the way to the floor." The engineer said, "Yes, you have to pump the pedal," and then, "Give me 20 more laps." I was still in shock: "You don't understand. I've just almost died!"

"I know. Pump the pedal and do 20 more laps," he said. I've done that as an engineer. You forget the emotion the driver is going through and for an engineer, they look at the data and say, "Yeah, he'll be OK." Racing helps me understand the driving side better.



Trying something new

I love doing things I've never tried or done before. For example, I recently played padel for the first time and really enjoyed it. And I'm always open to anything – it's something that pushes the boundaries of what you know. If you haven't tried something, try it! Because you don't really know what you like and what you don't like until you've tried it.

Modern sports cars

I won't mention any brands, but I really like to drive a modern sports car. We usually do it with my partner. We just hire one and drive around the south of England.



Experiences

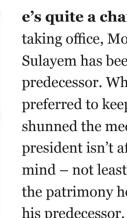
I think the world has changed in the last few years, especially around Covid. What do you remember most from the last five years? For a lot of people, certainly for me, it's experiences. Individual, unique things that happened that I'll remember for many, many years to come. It can be anything. It could be a meeting with a group of friends, a walk along the beach before I come to the track just to clear my mind. I think what Covid has changed is that - after spending so much time at home, locked up in the house for so many months – people want to do more and experience more.

As a former rally driver, global motor racing's head honcho knows a thing or two about commitment. His style is best described as... flat out, and he's not one to allow Formula 1's entrenched interests to dilute his vision for placing sport before business. Think you know what makes him tick? Think again - did you know he used to steal his dad's car?

BENSULAYEM



MOHAMMED BEN SULAYEM



e's quite a character. Since taking office, Mohammed Ben Sulayem has been nothing like his predecessor. Whereas Jean Todt preferred to keep a low profile and shunned the media, the new FIA president isn't afraid to speak his mind – not least when it comes to the patrimony he was handed by his predecessor. In fact, he makes it pretty clear that he's not too impressed with what he's inherited.

His style is not to everyone's taste. And it's fair to say that in

the two years he's been at the helm, he's upset quite a few people in the F1 paddock. There are those who believe that the championship will be better off without the FIA and its new, often combative, Emirati president – and, for the first time in a decade and a half, there's talk of a breakaway series.

Yet he's also made it clear that he's not there to be liked. He says he wants to reposition the FIA and insists he's there to



Uncompromising, forthright, combative. The FIA president is very different from his predecessor



defend the interests of the sport, not business. He was the main protagonist behind the push to expand the grid, and there was no one lobbying harder to get Andretti into Formula 1 – despite clear opposition from Formula One Management (FOM) and the existing teams.

Like anyone with an agenda, he's easy to interview – because he doesn't need to be asked tricky questions to give strong answers. He will steer the conversation in the direction he wants it to go and won't be bashful in talking about his own achievements, or his views on the role of the FIA. GP Racing sat down with Ben Sulayem in Abu Dhabi, a few hours before the final race of last season, to talk about his racing career, his first two years in the president's chair, and his vision for the future of the FIA and F1.

GP Racing: Mr President, let's start by talking about your path in racing. Where did your passion for motorsport come from?

Mohammed Ben Sulayem: I've always loved speed. As a kid I remember watching the speedometer, watching the driver and what he was doing with the pedals – and somehow it always made me feel good. I started driving when I was 10. In the summer we used to go to the desert for a few months. And I remember my father would come from the government, and he'd sleep in the afternoon – and then I'd 'borrow' the car. I'd push the car out of the parking space so that the driver wouldn't hear it - I don't know how I found the strength to do that – and then I'd slowly reverse it and go for a drive.

And then I'd come back and put the car in exactly the same position so nobody would notice. But of course, there would be less fuel in the tank, so eventually they found out. But it took them a long time to figure out that it was me who was taking the car.



GPR: Being a racing driver in those days wasn't a very prestigious career, to say the least, in the region, was it?

MBS: I was kind of a pioneer when I started. Of course, people didn't accept the sport. If my father were alive, I don't think he would have allowed me to follow this path. But I'm sure he would have been very proud of me now. Perception has changed. Like in other countries, once you have a hero, a champion, it becomes popular. So it was me who pushed those boundaries. But then, when I started winning, the whole thing turned around. Now people had a hero... because we weren't doing very well in football and other sports, so I was maybe the only sports hero or champion for many years.

GPR: You are a 14-time Middle East Rally champion. Nasser Al-Attiyah is getting close now to that record...

MBS: Records are there to be broken. I'm proud to hold this record. And when someone says "I want to break the record", it means that I am the target. And if I am the target, then I'm somebody! So let them do it. If they break the record, then

Ben Sulayem won
the Middle East
Rally Championship
a record-breaking
14 times driving
for Toyota and
Ford, and also
competed in a
number of World
Rally Championship
events from
1988 to 1995

somebody else will be motivated to go and break that record.

When I remember those days now, I'm shivering. We used to do up to 240km/h on gravel in the desert. 240 over blind crests. If someone comes from the other side, it's the end...

Once I won, I never looked back. Ever since I won the Middle East Rally Championship, I've never lost again. But the event I will always remember, the one that's engraved in my mind and heart, is 1988. I had a car accident that year and broke my neck, C5 and C6 [vertebrae]. And I couldn't go to Oman, one of the toughest three-day rallies. I went to Germany, to a professor who said he could help me. They had to graft a bone, my vertebrae were gone and they had to drill holes and put in titanium pins. But I was still leading the championship, even after Oman, and the next race was in Dubai, my home race. My doctors gave me hope. Hope that I could have lived without!

I asked as if I was joking, which I wasn't, "Can I drive?" And the German professor said, "I can put you in the cast, but will you take the pain?" I said, "Of course." But my vertebrae were destroyed, and the disc was gone, and all the load had to go on my nerves. And they put me in the cast and, so that I could see where I was going, I had to tilt my seat – and I could drive.

I remember I had the certificate from him that I'm stable here [points to his neck]. But I probably wasn't here [points to his forehead]. Anyway, I took part in the rally and won it. So, I won the championship. And I still remember, before one of the stages, a marshal came up to me and said: "Excuse me, champion, but you shouldn't do that. It's too dangerous." And he started to cry, so I tried to calm him down... It's funny to look back now, knowing that it's behind me. But I think it shaped me, it shaped my will, my passion, my determination. French television then nominated me for the most courageous sportsman at the time, but I couldn't go to the ceremony because I was undergoing surgery.

I HAD THE CERTIFICATE FROM THE DOCTOR TO SAY THAT I'M STABLE HERE [POINTS TO HIS NECK]. BUT I PROBABLY WASN'T HERE [POINTS TO HIS FOREHEAD]



MOHAMMED BEN SULAYEM

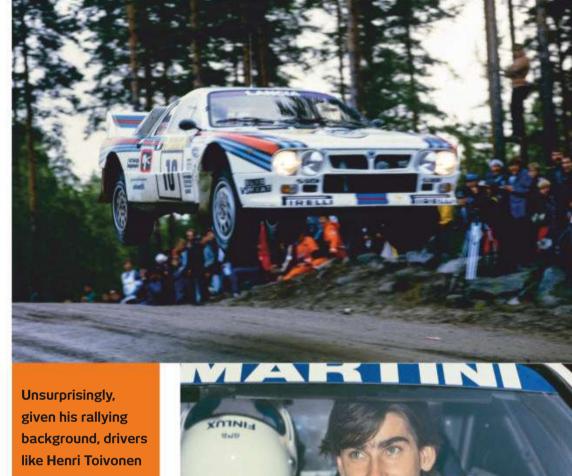
GPR: We were talking about heroes. Who were yours?

MBS: I had a lot of respect for guys like Walter Röhrl, Henri Toivonen, Hannu Mikkola, Stig Blomqvist. These drivers were legends and they will always be special to me. And you're right to ask about heroes. That question actually makes me think of something else. You know there is this talk about a possible split between the FIA and Formula 1. Have you heard about that? A split! A split between what? I've said it many times and I will say it again. It's easier for the Pope of the Vatican to get married a hundred times and divorced a hundred times than for F1 and the FIA to split.

You asked me about heroes... And you can ask the same question to young drivers: "Who is your idol?" or "Whose path do you want to follow?" And if they want to go into Formula 1, they'll tell you Fangio, Senna, Schumacher, Hamilton, Vettel, Alonso. All the legends of the sport.







(right and above) had the full respect of Ben Sulayem

That is our history. You can't imagine the sport without it.

GPR: You studied abroad, right?

MBS: Yes, in the USA and also in the UK and Northern Ireland. But, you know, it's not just your education, rallying brings you closer to the people. You go to remote areas, you meet people in villages, you meet people who don't have phones... You're out there practicing and, if your car breaks down, you might sleep in it before someone comes to rescue you. And you help people because if you don't, they won't help you. So those things have shaped my personality too, it's not just education.

GPR: You chose this path, a career as a motorsport politician if you like. Why did you do it? What drives you?

MBS: I love the challenge. I'm motivated by the challenge. And if someone wants me to win, they just have to say the wrong words to me, "You can't do it." As soon as I hear that, I'll do everything to win. If you ask me if I was confident that I was going to be president of the FIA, I'll say yes. Yes, I was. It's not ego. Work and be smart. And follow up. I see things that maybe other people don't see.

I remember during my campaign they were telling me all about this social media: 'Oh, we can get you this and that

Similarly, double **World Rally Champion Walter** Röhrl (left and above, left) was one of Ben Sulayem's 'heroes'



EASIER FOR THE POPE OF THE VATICAN TO GET MARRIED A HUNDRED TIMES AND DIVORCED A HUNDRED TIMES THAN FOR F1 AND THE FIA TO SPLIT



MOHAMMED BEN SULAYEM

I DO MY JOB. I DO IT QUIETLY, GETTING WHERE I WANT TO TAKE THE FIA, REPOSITIONING IT, BEING FAIR, BEING STRONG

number of followers.' I said I have 235 clubs and associations and half of them are supporting me. There are 120 left. So why do I need the millions on social media? Just focus on the 120 left. If I get even 50 of them, I will have won.

That campaign took me 12 years. And coming from this part of the world, with this nationality, with this skin, with this name, with this religion, it was even harder for me to win.

GPR: What did you think of the job before you took it? And eventually, what was it like?

MBS: Good question. Yes. You know, let's have a fair fight. A tough fight. A challenge. Anything. But don't throw the dirt. That is not acceptable. When the media comes after you – especially, I'll be honest, some of the British media... Fine, you come at me, I confront you. Where is the proof? Prove it.

They don't come back to me. But the damage is done. I have prevailed. I don't see it anymore.

I was elected to be fair, I was elected in a non-profit organisation and I don't get a salary. Would you say that someone forced me? It was a will. Nobody threatened me to be here. So I have to accept and expect everything. I will never

With F1 CEO
Stefano Domenicali
at the 2023 season
finale in Abu Dhabi.
The pair don't
agree on everything
F1 related...

With Bernie

Ecclestone in

Ben Sulayem

campaign to

become FIA

a long one

president was

admits his

Turkey in 2011.



let go. And you know, I'll tell you something — I'd rather do one term and make a real change than sit for 12 years just to enjoy the red carpet. That has never worked for me. I've never sought the red carpet. I've never wanted that.

I do my job. I do it quietly, getting where I want to take the FIA, repositioning it, being fair, being strong. We're the owners of Formula 1. The FIA Formula 1 Championship, we lease it, we're the governor. We're not a service provider. A service provider is somebody you can bring into this building and tell them to clean the place – that's a service provider. We're not that.

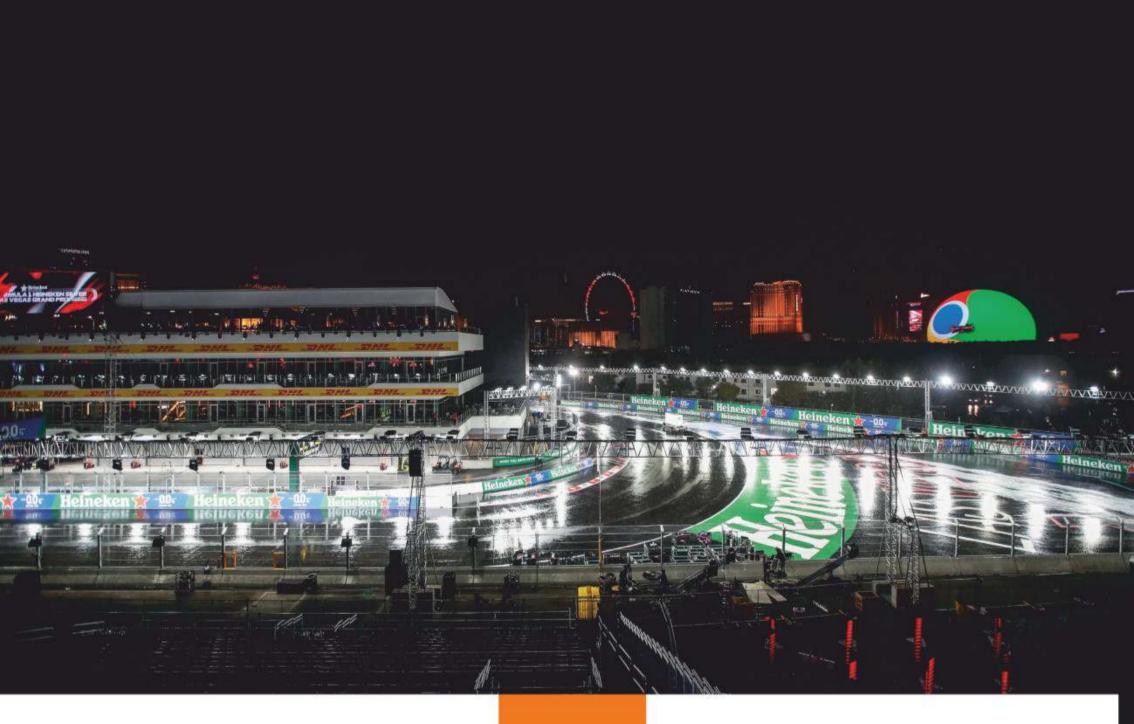
GPR: Does Formula 1 need a strong FIA to be successful?

MBS: Strong. And fair. Yes. And if you're a big company, a big business like a manufacturer or a sponsor, would you waste your money on something that's not well governed or strongly governed? I talked to a lot of the big companies, the OEMs, and they said, "We're only in because you take care of fairness." And we will have a strong Federation. If it's weak, why should anyone invest?

GPR: Do you have to agree with FOM on everything?

MBS: No. FOM has its points. But today, since I took over the presidency, we're in a much better position together. And if you told me that I could go back and change some of the things that happened, for example, when I got hit by the media – I wouldn't change anything.

Let me give you an example from Las Vegas... The president of the FIA is the one who signs the homologation for the new



track, or for all the tracks. I supported it. I could have said no, [because it wasn't ready in time for inspection]. But as soon as my team said it was safe... because I'm a driver, I care about the wellbeing of the drivers and the people around them, our staff and the marshals. I did it. It was a big thing. If I had said no, it would have been disastrous [for F1]. But it would have been legal. But I'm careful because I love the sport. At the end of the day, we're in the same boat. We may have different missions. But we're in the same boat. We cannot let the sport sink.

GPR: The FIA, as the referee in this sport, often comes under fire for decisions it makes, and it seems that sometimes there's no way to make everyone happy. How do you deal with that?

MBS: I never take it personally, but I'm here to support my team. There are people who volunteer their time for us. And one of the things I'm most proud of is that I'm the founder of the campaign against online abuse which was founded largely because of the online abuse of one our female stewards. You know, thank you for these questions because this is our reality. If you took the volunteers out of any sport, not just F1, would the sport continue?

GPR: Most likely not, no.

MBS: Thank you. Olympic Games. Motor racing. Football. Nothing. It's true, especially for us. We have, I don't know, about 700 volunteers for each race. These people dedicate and give their time to the sport we all love. The stewards are the same. And then, at the same time, we have to deal with threats to our stewards. We've had death threats, one of our

Ben Sulayem supported the homolgation of the Las Vegas circuit, because not to have done so would have been a disaster for F1

colleagues, a lady from Spain, was attacked on social media. She's had death threats, she's been told that they're going to come and kill her or rape her or hurt her family.

I don't want to be in that position. But I also had to deal with it when they threatened me after Abu Dhabi 2021. Did I panic? No. But to go on and attack our stewards, our officials... I have to protect them. That's why we launched this campaign, an anti-toxicity, anti-abuse campaign. And we've got a lot of support, from federations, from governments. We have people who understand that this is a huge problem that affects every sport. And if we do nothing about it, the sport will be damaged beyond repair.

GPR: You mentioned that the stewards are also volunteers. There are those who think that F1 should have a set of professional referees, a different system that would ensure more consistency. What do you say to them?

MBS: They're right. And that's why we've launched the steward's pathway, we've created a pathway for race directors. When we had Michael Masi – and Michael was good – we didn't have anybody else. Charlie Whiting was great, but there wasn't anybody else. That is not the way to run the sport.

This sport should run without the president of the FIA. It should run automatically. The FIA should run without certain individuals. That's why I'm making sure that we have the ROC [Remote Operations Centre], which is remote race control, something similar to what's done in football. And we try to find people and make them grow. We reach out to people in Latin America, we reach out to people in Africa. Sometimes we only talk about diversity when it suits us.





MOHAMMED BEN SULAYEM

WE CAN'T JUST HAVE ONE RACE DIRECTOR FOR F1. THERE'S FATIGUE. ACCIDENTS HAPPEN. WHERE DO I GET THEM? EVERYONE IS PUSHING ME, BUT WHERE DO I FIND THESE PEOPLE? ON GOOGLE? DO THEY SELL THEM ON AMAZON?



One of Ben
Sulayem's first jobs
as FIA president
was to deal with
the fallout from the
2021 Abu Dhabi GP

I inherited things. I inherited this mess, which was purely human error. And Michael is a good man. He's not finished with motorsport. I'm the president. I see things differently. I don't take anything personally. I never hate the person. I may hate the results of their actions. But I never hate the person. He's a good person. Yes, there was a problem, but for me... If we need him and he's willing to help us in some areas, he's welcome in the sport.

GPR: What are the main challenges that are facing the FIA and Formula 1 at the moment?

MBS: In F1 it's fairness that we have to have, also when it comes to the Concorde Agreement, the repositioning of the FIA. And I guarantee you that the sport will be even better, the business will be better for FOM and Liberty and for the teams, if there is a strong FIA. Because we're not

But there are good people there, whatever their religion or colour or whatever, and we're trying to build a pyramid where they can go to F4, F3, F2 and then F1. But it has to be a system.

We can't just have one race director for F1. There's fatigue. Accidents happen. Where do I get them? Everyone is pushing me, but where do I find these people? On Google? Do they sell them on Amazon? And again, you say we're a referee... Do you remember the 2022 race in Japan when the race was stopped [and there was confusion about how many points should be awarded]? Everyone blamed the FIA. But... *Excusez-moi*, if I may put it in French. Who wrote the rules? The FIA? Or did the teams, the FOM and the FIA approve them together? It's the F1 Commission. It's all of us together.

And then there are always complaints. 'Oh, you should have given the five-second penalty earlier, because if you had told us, we could have told the driver to push...' And then the next race: 'Oh, you have to listen to the driver first'. I mean, it's good that they have the FIA to throw things at. We're used to it. But we have to do our job, right?

GPR: You mentioned Michael Masi. He had to go through a lot after 2021. Have you tried to support him?

MBS: Yes. By calling him, by being with him. I was new.



Ben Sulayem has tried to support Michael Masi (above, left), the man at the centre of the 2021 Abu Dhabi controversy driven by money. But we are there to ensure fairness and to enforce regulations.

And transparency. And the other big issue is that motorsport is very expensive. It has to be affordable.

The legal side is also very challenging. My biggest problem when I took over was the financial situation of the FIA. We were very much in debt, four years before I took over. So that's a big challenge because you cannot go on tightening your belt. No, you have to generate more money. And you have to invest your money properly and spend it appropriately.

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F1 UNCOVERED

TV's **David Croft** explains the inner workings of the Sky Sports F1 commentary booth

INTERVIEW OLEG KARPOV PICTURE MARK SUTTON



"This is our usual setup with Martin [Brundle] at pretty much every track in the world. Today, you can watch and consume Formula 1 in many different ways - and if you want to have a setup like that at home, you actually can, because most of the tools we use are accessible. But most people don't and watch it as they would any other sporting event.

"The main element for us is the big screen, and that's the world feed, the same as the millions at home. We don't have any control over the pictures, I don't know what's coming up next and I only get three-second warnings for the team radios. But it's our job to add the bits viewers don't see."

"To help us bring more information to the viewers, we have other screens. One of the most important is the GPS map, the driver tracker, that tells us where the cars are on the track. It's useful for pitstops, for example, when you're trying to work out if someone's trying to undercut or overcut. Also, sometimes it's not clear who you're looking at: let's say you're on board with a driver, and sometimes you have to check the GPS to see who's in front. We could use the timing page, but page 4 of the FIA system only updates three times per lap. At Spa, for example, there's about 45 seconds between updates. GPS data is very important in that sense."

"We also have different timing screens. The timing page 4 is vital, not least because it's got full surnames! And when you're talking and you're trying to convey information, you don't want to waste time trying to figure something out, do you? For example, if you see ALO - well, you know it's Alonso, but if you're in a hurry, you don't want to lose that split second, and here you just read "Alonso"!

"We also have timing page 5, which is a bit more detailed and gives you tyre information. It's not an official FIA timing page, it's a FOM one, but it has some extra information like stint lengths and mini-sectors. At one point they even showed



those on the official broadcast, but I wasn't too keen on that, to be honest, because it's our job to build the excitement, not the graphics to tell you that nothing's happening."

"This is the so-called FIA Page 3, which shows you the weather, wind direction and track temperature, and it's also filled with information from the stewards, notes from the drivers setting fastest laps, and stuff like reprimands, penalties, blue flags, and so on. So, when there are a lot of track limit infringements, for example, like there was during the Austrian GP, it just keeps going up, like a fruit machine!"

"We have little intercom panels here. I can talk to the director, I can talk to the producer, I can talk to our assistant director. I can also talk to Martin, I can talk to our 'race control' where Anthony Davidson or Karun Chandhok are gathering information and listening to team radios to help us understand better what's going on in the race. I can talk to a third co-commentator if there is one. There are also a few other useful buttons - like the cough button, because sometimes you have to cough! Press it and it switches off the microphone, so you can cough as much as you like and no one will hear you. I could turn the FOM effects on and off if I wanted to."

"All of this is set up by our sound supervisors, Gareth, Mike and Mark, who alternate throughout the season – and one of them is always with us in the commentary booth. You can't see any of them here because they're always working in the background and we love them. Because if something goes wrong, they fix it very, very quickly."

"These are my handwritten notes. This is how I did it for the first race, and how I'm still doing it now. These are two sheets of paper with stats and other useful information. The first one is divided into teams and drivers in each box, and then there is a circuit map on the second one, with more general info about the race and so on.

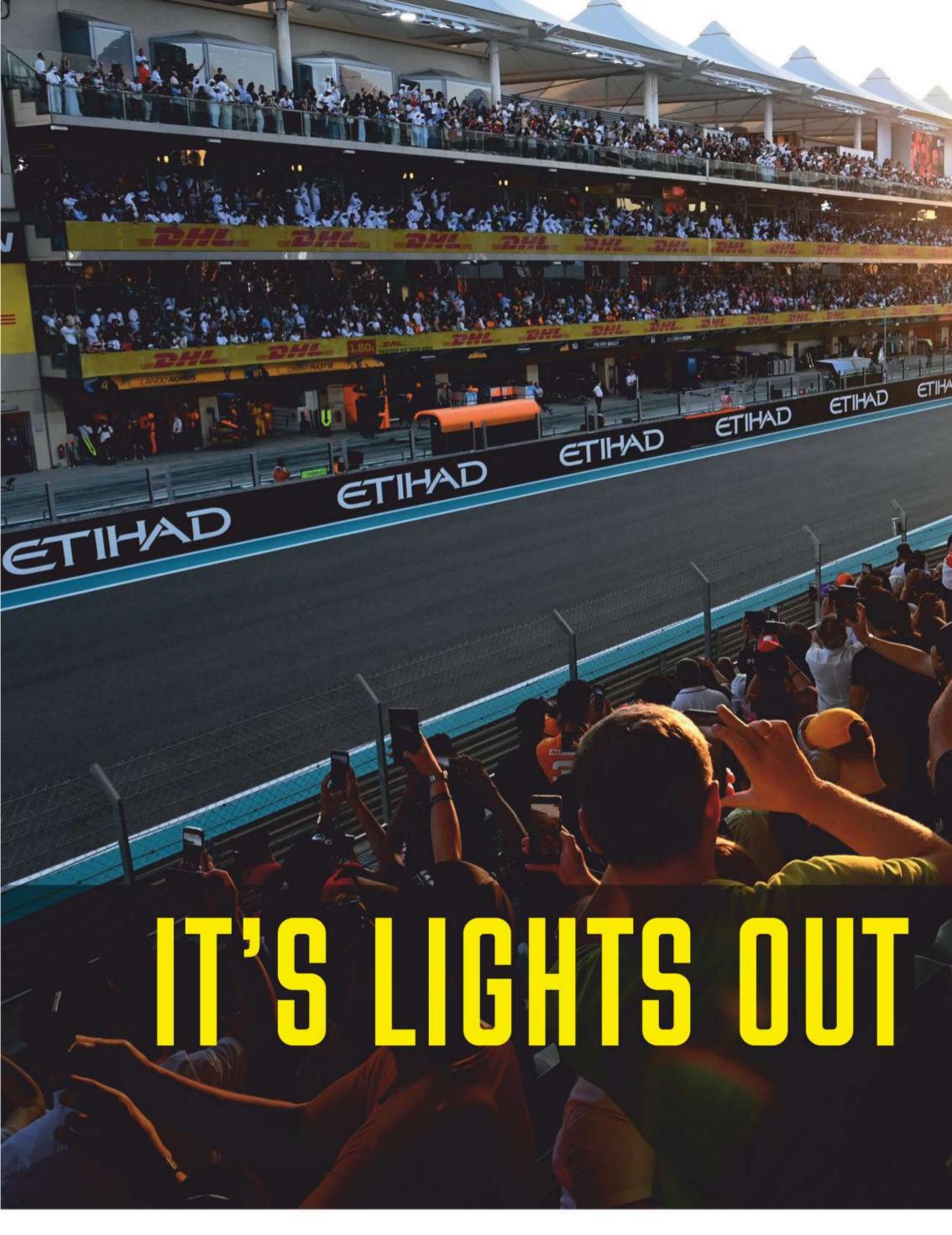
"And then there's the notes, which I write by hand because I find it helps my memory. If I'm trying to remember a stat, it's easier if I wrote it down a couple of days ago. I try to keep it simple. If I did more, I'd just get bogged down. I want to use stats to help the conversation and to support an argument, or to give a counter-argument. Or to give the viewers some fun figures."

"There are more stats on the sidewall, different charts with all the drivers' wins, podiums, last wins, birthdays and stuff. We have their last 20 race results, their past performances on that particular track, qualifying performances, qualifying battles against their team-mates and a lot more. And there's a sheet with the names of their race engineers. If you hear a voice on the radio speaking to a driver, we know who that voice belongs to."

"A colleague, but also a friend. Martin and I had one rehearsal together before we started working together in 2012 – and decided that was it, we didn't need to rehearse any more. We kind of got it. We clicked straight away

"Martin has encyclopaedic knowledge, amazing awareness and understanding. He is absolutely unrivalled in this business. He knows everybody and he knows the stories. And he's gained people's trust. Because he never puts Formula 1 down, he never puts the sport down, but he will point out where he thinks things are wrong and always give an honest opinion and he is happy to do so.

"We've been doing this together for over 220 races now. And it doesn't feel like work. It's just two mates talking about something they love."





It's Friday morning, three minutes into the planning meeting for the final round of the championship. The Sky Sports F1 production team are briefing their colleagues on the day's programme – but a momentary distraction causes a brief pause.

"Can you note that down?" asks Simon Lazenby – a presenter who has been with the Sky team since it started broadcasting F1 in 2012 – as he turns to *GP Racing*. "Terrible production," he jokes, and leans back in his chair, satisfied to have provoked a burst of laughter in the room. The first, but by no means the last, joke directed at an outsider allowed into Sky's field operations centre in the TV compound area of the Abu Dhabi circuit.

On-site producer Tommy Herz and his colleague Jess Medland, who is in the meeting remotely from the London base, are going over a 21-page second-by-second practice day coverage plan – copies of which have been handed out to everyone by Sky's director of F1 Billy McGinty.

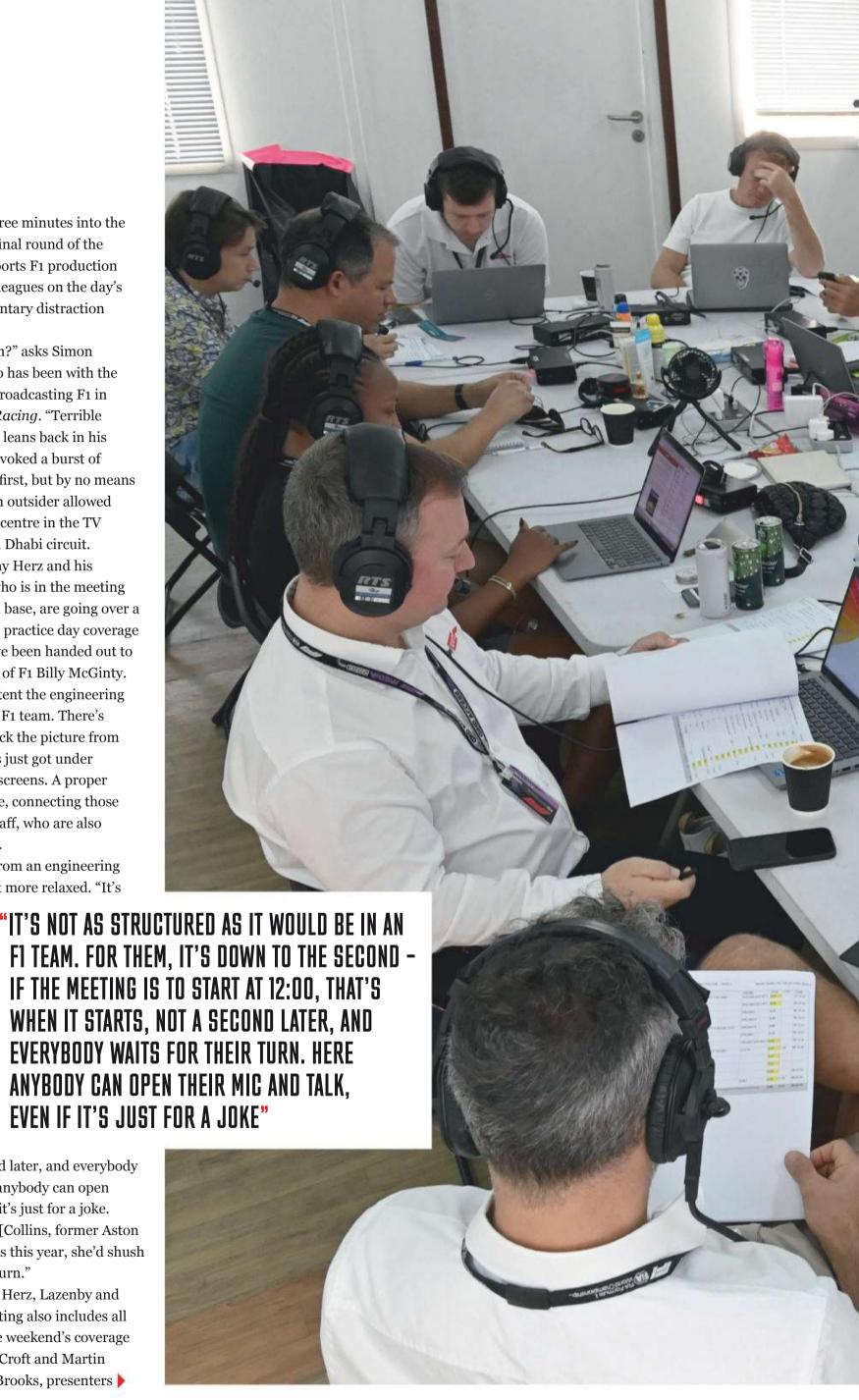
It resembles to some extent the engineering briefing setup of an actual F1 team. There's many monitors feeding back the picture from the track – F2 practice has just got under way – and various timing screens. A proper intercom system is in place, connecting those at the track with the UK staff, who are also seen on one of the screens.

The biggest difference from an engineering debrief is just that it's a bit more relaxed. "It's

not as structured as it would be in an F1 team," explains Anthony Davidson, one of the many Sky presenters to have seen the sport from both sides, as driver and pundit. "For them, it's down to the second - if the meeting is to start at 12:00, that's

when it starts, not a second later, and everybody waits for their turn. Here anybody can open their mic and talk, even if it's just for a joke. It was funny when Bernie [Collins, former Aston Martin strategist] joined us this year, she'd shush anyone who spoke out of turn."

In addition to McGinty, Herz, Lazenby and Davidson, the on-site meeting also includes all the other key figures in the weekend's coverage commentary duo David Croft and Martin Brundle, reporter Rachel Brooks, presenters





Ted Kravitz and Naomi Schiff, coordinator Emma Chapman, website correspondent Sam Johnston, and Damon Hill, one of the several world champions among the Sky crew. In total, including also Sky Italy and Sky Germany staff, the broadcaster brings 55 people to races.

Billy McGinty:

"We're a big team. We have the content editorial team, the team of producers of different levels. There is also technical and engineering staff to set all the systems up. And my role is to oversee everything. And then, remotely, from London Sky studios, we have 20 people, again, a mix of content and editorial and technical and production.

"In terms of equipment, like the teams we have kits, transferred in exactly the same way: the technical, engineering, sound and vision equipment via air freights, together with F1 teams' equipment; and we also have five sets of sea freights with tables, chairs, etc – again, exactly like teams.

"We operate with three cameras each weekend. There is the fourth one for SkyPad, but it is operated from London, remotely. All the crews have designated tasks during the weekend, depending on the programming. On Thursday, during the media day, there's content creation and content gathering – so, for example, in Abu Dhabi we had interviews with Lando Norris and Oscar Piastri, we've

done a piece about Max, fronted by Damon. Friday, once we get into a live show, each camera is assigned to a certain role. We know when we need two cameras with Simon, one with Ted, or with Martin on track, on Saturday and Sunday there will be a cameraman with Rachel in the TV pen, and so on."

The meeting pivots to a discussion of the latest news. The big story of the Abu Dhabi buildup is the *Daily Mail's* reporting that Lewis Hamilton had spoken to Red Bull before signing his new Mercedes deal.

Croft, Brundle, Hill and Kravitz all offer insights – it's clear the Sky pundits know what happened, how and when - Herz reaches out to Red Bull to see if Christian Horner could join Simon, Naomi and Damon in the paddock after FP1 for a chat that would at least partially address the Lewis rumour. Minutes later that chat is confirmed. It'll be Simon who asks Horner the relevant question despite already knowing the details – and it will be Horner confirming to viewers that, yes, it was Lewis's father Anthony who had contacted him about a potential move.





Simon Lazenby

"I love telling stories live as they're happening. And that's the best part of my job, that we really are live all the time. If there's a breaking news story or something controversial has happened, you're there right at the heart of the story. And when there is a story, you've just got to be honest, and go directly and ask a question. I don't believe in anything else. There's no point in hiding from it, no point sugar-coating everything. If you can, you get in there and you want to draw the answer.

"You've also got to be aware of the context of why people are doing it. Christian and Toto [Wolff] like to wind each other

up, and he goes out to get under his skin and vice versa. That's just the paddock, right? You have to be aware of agendas within the paddock, and people want to talk to you sometimes when they have something to say. Sometimes they're doing it to plant seeds. There's a lot of gamesmanship up and down this paddock. The longer you spend here the longer you get to know the personalities, it's all part of F1, and why we love it."

It's a lot of time and effort spent on a move that didn't and won't happen – but as we know now, it's not like the prospect of Hamilton leaving Mercedes was total fantasy...

Saturday. Eight minutes before qualifying gets going, Rachel Brookes has taken her spot in what's called the TV pen and is preparing for one of the more frenzied parts of her weekend. The TV pen is where the drivers head minutes after getting out of their cars. Rachel and her counterparts from a couple of dozen broadcasters worldwide are here to take in those drivers' frustrations, celebrations and all the other various emotional reactions.

Brookes is sharing her spot with colleague Mara Sangiorgio from Sky Italy. Though there's another half an hour or so until even the first driver gets here, they're already getting stuck into work. In Rachel's hands is a large notebook, with detailed driver stats and the in-session notes she's making. After all, the initial questions she will later ask are key to the driver reactions Sky will be airing. And in that lies perhaps the most stressful task – finding that tricky balance between maintaining the cordial relationship with drivers you're talking to all season but still pressing on them and trying to get their real emotions out when that's required.





The 21-page second-by-second plan for Sky's coverage of the Friday practice day in Abu Dhabi



The screens in the production room show the action at the track and also link back to the London studios



Oleg listens in to the chatter intently and tries to digest the practice plan at the same time

Rachel Brookes:

"Everyone's making fun of my notebook because it's really big. But I've got every qualifying and race result for the last 12 years in there, and all my notes. For each session, be it qualifying or a race, I have a double-page spread and a box for every driver so that everything that happens during the session goes in that box, so when they walk towards me in the pen — and sometimes I have no idea who's coming — I just can look at the box with their name and I've got all the talking points.

"It is difficult. In one ear I hear what they tell me, and in my other, I have a commentary of the race still going on – to know what's happening, because I know I'd need that later - and also our internal radio. That's one of the tough bits. As well as switching your mind between drivers, especially if you've been waiting for someone for a while – you look at your notes, you have your questions ready in your head – suddenly there's someone else coming towards you. But the drivers, they're all very good, they understand that you need to just gather your thoughts for a second they know you've got a job to do."

A different Sky setup is nearby – the SkyPad, operated this weekend by Davidson. As it becomes clear Hamilton isn't making it out of Q2, Ant is in a spirited discussion with London. Together they try to figure out where Lewis's qualifying went wrong – and, a couple of minutes later, the footage is cued up and Davidson is ready to go on air to

explain how Hamilton came to miss Q3, before Q3 has actually started.

About 10 minutes later, Lewis is with Rachel. By then she had already spoken with Alex Albon and Lance Stroll, the latter sticking around for a bit next to the Sky crew to watch the broadcast. Having spoken to Mara, Lewis also stops in his tracks to watch qualifying and, once it's clear it's another Verstappen pole, he joins Rachel to tell Sky viewers of how he "struggled with the balance".

Another half an hour of work follows as the top-10 qualifiers trickle in. First it's Nico Hülkenberg and George Russell, holding up the process with a series of overly polite 'after you's as they hash out who does their Sky interview first. Then it's Yuki Tsunoda, and Fernando Alonso. Once Tsunoda is done, Alonso waits for Brookes's colleagues to reset the camera angle – with a grin on his face, since it's the usual procedure after any

interview with the diminutive Yuki.

At that same time, Anthony is comparing the laps of Verstappen and Charles Leclerc, getting into the tiniest details – which includes zooming in on the steering wheel dashes to see which gears they're using through corners. If needs must, this will make up his live analysis on air. But there are other things to discuss – Ant is told that Oscar Piastri has been summoned to the stewards for potentially impeding Pierre Gasly, and shortly thereafter steward Garry Connelly makes his way over to discuss it, view it again through Sky's multifunction monitor, and take in an outside opinion. Connelly stays with Davidson until he's seen the incident multiple times and heard Ant's take, then heads back to the stewards' office where the drivers involved are due to appear shortly. Even before they do, viewers will have already seen a detailed review of the footage.



Anthony Davidsor

"There are many clips I look at that we don't end up using, because you never know where the story is gonna go. Quite often, it's a moving target. With Lewis, I knew something was wrong. You start looking at the time difference with George [Russell], and you think, 'No, that can't be right.' So I got the team back in London to start looking through the onboards of Lewis. The problem there is they're not trained racing drivers. But with a bit of blind guidance from me, trying to steer them where to look, that works. And we ended up finding something. Lewis had traffic on the first run in Q2, and then, on the second run, he was just fighting the car, with very small moments on the rear stepping out – and I was able to show people back at home, that this is the moment where he's fighting the car and, when he says there's something wrong, this is what he's talking about.

"And it's nice to know that our

job is appreciated in the paddock as well. Sometimes even stewards come and ask to look at clips. I guess it's a bit of a comfort blanket for other people up and down the paddock to know that we have this technology here. And with a simple request back to London, we can get a clip in, and I can analyse it in detail, using all the tools. Nobody else can do that in the paddock in terms of broadcasting. And in this case, it was nice to give that extra bit on Piastri and Gasly to people back at home watching the show. Because they'd have never seen that footage until probably next morning – but here they have it straight away with someone analysing it for them."

Back in 2019, Ferrari famously tried to use Karun Chandhok's SkyPad analysis not only as a comfort blanket but also as a piece of "new evidence" as it tried to fight Sebastian Vettel's Canadian Grand Prix penalty.

race of the season has wrapped up, post-race show hosts Naomi Schiff, Simon Lazenby and Damon Hill leave pitlane and take up their spot close to the race control building. The three people in the shot are supported by around a dozen behind the scenes – two camera people to provide both close-ups and wide shots, two lighting technicians, sound engineers, and one extra person with a screen mounted on a stand, attached to which is a board with the race results. Tommy and Billy are here, too, to steer the broadcast and assist with anything that may be required. The post-race paddock is organised chaos, after all, and the Sky crew are repeatedly buzzed, left and right, by mechanics pushing huge trolleys loaded to the brim with tyres, and colleagues from other channels, and various VIPs.

"20 seconds. 15 seconds. Ten seconds... Five..." Damon and Naomi are back on air, giving their views on Sergio Pérez's penalty for clashing with Lando Norris. As they talk, they're fed a countdown - again, second-by-second - until the moment Oscar Piastri is ready to enter the frame. An interview with the Australian had been arranged by Tommy with McLaren's press department and, as he gets his own microphone, he goes over his rookie season.

Sunday. Just a few minutes after the final

"Two more minutes," says the voice on the chat. Next, one minute. And here's Lazenby, rerouting the conversation into some banter about Oscar's jokey social media squabble with Chandhok after Australia's defeat of India in the Cricket World Cup to wrap the interview up.



Naomi Schiff:

"It can be very confusing, when someone is talking in your ear all the time. Now I've got used to it, and it's something that became somewhat of a skill. Not like for Crofty, because if you tell him he's got 30 seconds to say something, he'll hit it – but yes, if they say '40 seconds'. I know what I need to do and when I need to wrap up. But it does throw you off sometimes. We have a lot of voices in our ears. First of all, the presenters around me, you've got the countdown, and then you've got your director, and every now and again, you have the producer at the same time.

"People probably hardly realise how organised it is and how many people are behind it. When we're

live, we've got sound engineers in front of us, we've got someone who's holding the monitor, so we can see exactly what's on screen - often, we'll ask the drivers to comment on the picture we have live on TV – and then, of course, there are cameramen and assistants. Because if we start walking around the paddock, for example, the cameras have to walk backwards – and you need someone to assist because the cameramen don't see where they're going. So it's a big organisation. And it's a lot of people that make the show happen."

After an ad break (with a countdown to its end of course) Lazenby greets the audience again

with a scripted-in-advance wrap-up of the season results. He reads it off his phone while the broadcast is showing the championship table, then the hosts move on to the race's other events. One of its biggest flashpoints was the battle between Hamilton and Alonso – and Rachel has already spoken to the former, the interview cued up and aired, before it switches to the SkyPad where Davidson is ready with his analysis. Then it's time to air the interview with Alonso, which allows for the segue into talking about his season as a whole.

Two more guest spots finish the programme. First, it's championship boss Stefano Domenicali – and, while he's

talking, next guest Christian Horner has made his way over here, too, accompanied by Red Bull press officer Paul Smith. Croft and Brundle, having already arrived from the commentary booth, and Brookes, done with her TV pen duties, keep Horner busy chatting while the Domenicali interview finishes up. One of the cameras picks up Horner for a close-up. These are precious moments for a broadcaster – two major personalities live on air at the same time. And once Horner gets the signal from Tommy, he enters the frame of the interview and then he and Domenicali hug it out.

"Lovely work," sounds off the voice from London. "Lovely work."







Herz is Sky F1's on-site producer but the operation has another 20-plus people working from London

Damon Hill:

"The most interesting thing for me in this job is the fact that I've learned so much from doing this, that I wish I'd known when I was racing. When you're racing, you have a very tunnel-vision state of mind. You're not interested in what everyone else is doing, you have a direction and you kind of pursue that. Whereas this, you have to have a really wide-angle view of the whole of the industry, the sport or wherever you want to call it.

"And I was completely shocked. I sort of felt, when I was a racing driver, that people were observing me very closely. And I've seen drivers respond to being photographed when they're having lunch and stuff like that. They feel

like animals in a zoo. And it's not a nice feeling. 'Why are you filming me having a cup of tea?' But when you're on the outside, you have a different perspective. You are trying to give the viewers, the fans, as much information about F1, so that they can get into it. You're basically reporting for them because they can't have the privilege we have, the privilege of being here. I hope they like it!"

The season's coverage is almost 'wrapped'. The entire crew goes out onto the start-finish straight – which is at Sky's full disposal one hour after the end of the race – to film the season-closing segment and say their goodbyes to the audience after the long campaign. It won't be long until they're all together again for the 2024 pre-season in Bahrain... 🙃





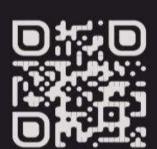
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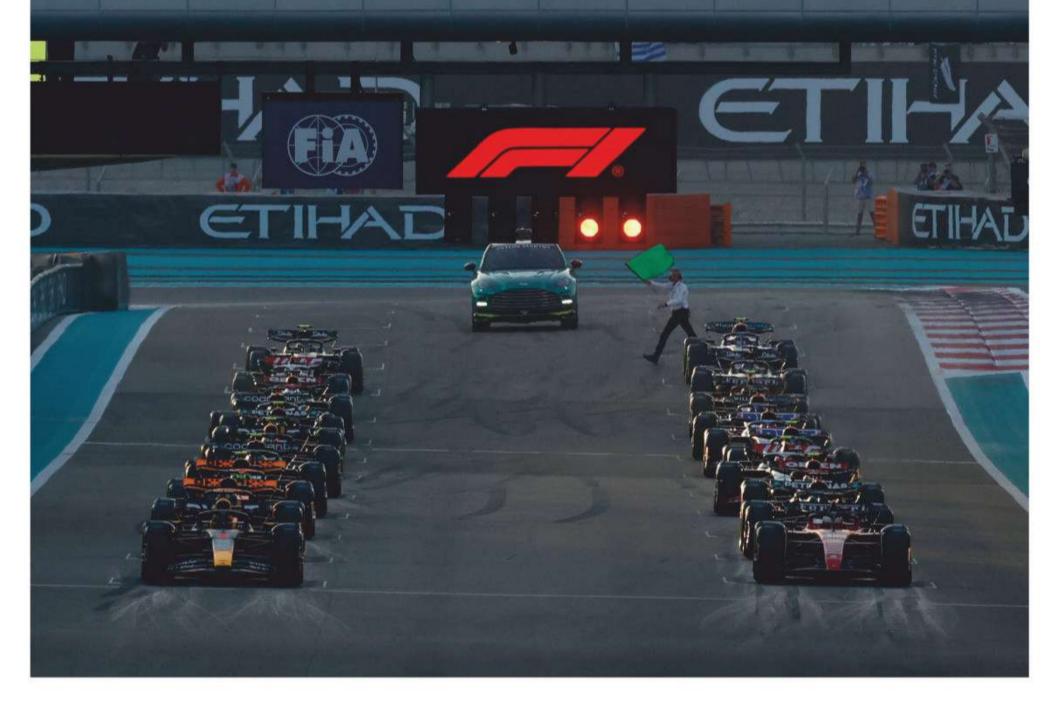
2024 F1 TEAMS

Red Bull and Max Verstappen aim to break yet more records this season – but there are nine other teams aiming to make sure that doesn't come to pass...



RED BULL 86 MERCEDES 88 FERRARI 90 McLAREN 92 ASTON MARTIN 94 ALPINE 96 WILLIAMS 98 VCARB 100 STAKE 102 HAAS 104





GARAGE 1 RED BULL RACING



BIGGER, BETTER, FASTER, MORE

Last year's RB19 car retained such an advantage that Red Bull was able to pivot to RB20 development mid-season. And that's what's giving rivals the fear...



Red Bull's technical department, headed by Waché and Newey, surpassed itself in 2023





The RB19 (left) was formidable, especially in Verstappen's hands, winning 21 times

After chalking up 21 of the 22 victories on offer in 2023, Red Bull has set itself a stratospherically high bar to leap over this season if it is to replicate the same level of crushing dominance. Ominously, it has the platform to do so.

While other teams have spent the off-season navigating the minefield of concept changes for a more competitive 2024, Red Bull's mission has been less perilous; its RB19 proved malleable across most conditions experienced over last season. Its low-speed handling was the comparatively worrisome trait, which culminated in its failure to secure a clean sweep of

wins as it was distinctly off-colour in Singapore. Everywhere else, it was putty in the hands of Max Verstappen, who very seldom had to face serious competition.

Through Max's 10-win streak between Miami and Monza, he overwrote the most consecutive wins record set by Red Bull alumnus Sebastian Vettel, whose nine wins in 2013 mirrored the team's modern dominance. Vettel's chain of four titles from 2010 to 2013 demonstrated the perfect mixture of Adrian Newey's design prowess and Seb's ability to plonk the car on pole, from where he'd almost cruise into the distance. Sound familiar?

Of course, the technical team under Pierre Waché goes beyond just Newey, with a crop of talented engineers all responsible for creating arguably F1's most dominant car. But there are challenges to navigate; the aero testing penalty it accrued in 2022 may still exert lingering effects on its next machinery, while stalwart

2024

season in Formula 1

Rob Marshall has upped sticks for McLaren after 17 years with the Milton Keynes squad. His departure leaves a void in the technical structure's senior leadership.

And then there's the Sergio Pérez problem. Although the Mexican's mission to secure Red Bull's first 1-2 in the drivers' championship was completed, he made heavy weather of it amid a mid-season dive in form. It almost felt that he had developed a severe allergy to Q3 after failing to make the cut on five consecutive occasions. And, as Daniel Ricciardo looms larger on the horizon, Pérez will need to match Verstappen more often to secure his seat.

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MAX VERSTAPPEN

Born 30 September 1997 (age 26) Place of birth Hasselt, Belgium Race engineer Gianpiero Lambiase Instagram @maxverstappen1

F1 HISTORY

Debut Australia 2015

Starts 185 **Wins** 54

Other podiums 44

Poles 32

Fastest laps 30

Titles 3 (2021, 2022, 2023)

2023 position 1st

The world champion enjoyed a near-perfect 2023, scoring 10 consecutive victories between Miami and Monza. At the final race in Abu Dhabi, Max led his 1,000th lap in a single season. He also completed every single racing lap - a total of 1,325. Verstappen and the RB19 were formidable and his 19 wins gave him a 290-point margin over Red Bull team-mate Sergio Pérez. Here's hoping the opposition can close the gap, otherwise it might be another unstoppable campaign.

2023 HIGHLIGHT

Max led 247 consecutive laps, starting in Miami, through Monaco, Spain and Canada, before finishing in Austria.



2023 LOW POINT

RESULTS

IN 2023

Total points

scored 860

1st place

2nd place

3rd place

Points-scoring races

Pole positions

Fastest laps

DNFs

Red Bull's clean sweep came undone in Singapore. A frustrated Verstappen was knocked out of Q2 by 0.007s and started 11th on the grid.



SERGIO PÉREZ

Born 26 January 1990 (age 34) Place of birth Guadalajara, Mexico Race engineer Hugh Bird **Instagram** @schecoperez

F1 HISTORY

Debut Australia 2011

Starts 257

Wins 6

Other podiums 29

Poles 3

Fastest laps 11

Best position 2nd (2023)

2023 position 2nd

After a promising start to last season, including wins in Jeddah and Baku, Pérez's form quickly unravelled. Mistakes in qualifying, the occasional lack of pace, and on-track incidents thwarted him - in contrast to a team-mate who was relentless in storming to the title. Checo secured second to give Red Bull its first championship 1-2, but the pressure will be on him this year. Old hand Dan Ricciardo and new talent Liam Lawson are waiting in the wings...

2023 HIGHLIGHT

Pérez became the first repeat winner of the Azerbaijan GP and also triumphed in Baku's Saturday sprint race.



A rush of blood to the head? Desperation overtook logic when Pérez crashed out following a risky move at Turn 1

2023 LOW POINT of the opening lap of his home race in Mexico

RED BULL At a glance

Debut Australia 2005

Races started 369

Wins 113

Poles 95

Fastest laps 95

Points 7,248

Drivers' titles 7

Constructors'

titles 6

TEAM INFO

Base Milton

Keynes, UK

Chassis

Red Bull RB20

Power unit

RBPT-H003

Website

redbullracing.com

Social media

@redbullracing

KEY PERSONNEL

CEO Oliver Mintzlaff

Team principal

Christian Horner

Chief technical officer

Adrian Newey

Technical director

Pierre Waché

Head of race

engineering

Gianpiero Lambiase

LAST FIVE YEARS

2023 1st

2022 1st

2021 2nd

2020 2nd

2019 3rd

Max Verstappen was only 45 shy of 620, the maximum number of points he could have scored in 2023

Reb Bull scored the most constructors' championship points in 18 of the 22 rounds

GARAGE 2 MERCEDES



THE GREAT RESET

The last decade's most dominant team hasn't enjoyed the transition to the stiffly sprung cars of F1's second ground-effect era, but it now knows where it's been going wrong





George will want to establish himself as top dog now Lewis is heading off to Ferrari in 2025

Last year James Allison returned to a full-time role within Mercedes' technical department





He didn't win for the second season running but Lewis added to his tally of poles in Hungary

An open letter to fans between the early rounds of 2023 laid bare just what Mercedes thought of its regression from title winner to scrapping for podiums. The selfflagellation from the team's key figures became admittedly tiresome, but it at least acted as a precursor for some progress on track.

Like a lost wayfarer at sea,
Mercedes had to plot a new
course and divert away from its
radical-but-fruitless 'zero-pod'
aerodynamic solution. The Monaco
facelift updated the car with a more
conventional set of sidepods, taking
that perceived weakness off the
table. But as the team has admitted,

the majority of the gains came through optimisation at lower ride heights (see p46).

Performance improved but not enough to prevent 2023 becoming Mercedes' first winless season since 2011. Brackley's finest didn't experience the top step of the podium in the two years after Merc purchased the one-and-done Brawn GP team after its wealth of successes in 2009. After steady improvement, the dawn of the turbo-hybrid era catapulted Mercedes to the front of the field, since its powertrains had the most grunt and near-bulletproof reliability from the off.

Last year's technical shuffling

resulted in Mike Elliott's departure as James Allison returned refreshed from a three-days-a-week stint as chief technical officer. Having called the shots in the engineering department during Mercedes' peak, the inspiring and fastidious Allison has ensured the team now has what Lewis Hamilton has termed as a "North Star" to follow as it aims to shape a more prosperous future.

Cheerful epithets have been heard from drivers Hamilton and George

George Russe only 6 laps in 2 down from a h of 99 in 2022 Russell in their early explorations of the W15 in the simulator, and head honcho Toto Wolff reported that the seven-time champion had suggested 2024's offering "feels like a car for the first time in two years". Mercedes must hope that their drivers' current goodwill must translate to the real thing in testing.

If the W15 is far more driveable compared with its forbears, there's a chance Red Bull's stranglehold on contemporary F1 could be loosened. Hamilton's hunger pangs for an eighth title remain strong after all, while Russell will want to ink himself in as lead driver for 2025 as Lewis heads to Ferrari.

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LEWIS HAMILTON

Born 7 January 1985 (age 39) Place of birth Stevenage, UK Race engineer Peter Bonnington Instagram @lewishamilton1

F1 HISTORY

Debut Australia 2007

Starts 332 **Wins** 103

Other podiums 94

Poles 104

Fastest laps 65

Titles 7 (2008, 2014-15, 2017-19, 2020)

2023 position 3rd

Before 2022, Hamilton had won a grand prix in every season he had driven in Formula 1 - going back to his debut in 2007. But in the past two years his Mercedes hasn't been able to match the all-conquering Red Bull, scuppering his run of finishing on the top step of the podium. Hamilton is still capable of putting in brilliant performances, as his six podiums and pole lap in Hungary last year attest, but needs a car to challenge for that eighth world title.

2023 HIGHLIGHT

Doggedly pursuing brake-troubled leader Max Verstappen in Austin (shame about the post-race penalty).



2023 LOW POINT

RESULTS

IN 2023

Total points scored 409

Points-scoring races

Pole positions

Fastest laps

DNFs

1st place 2nd place 3rd place

Off the start in Qatar, Hamilton made an ambitious move around the outside at Turn 1, but caught his team-mate and spun into retirement.



GEORGE RUSSELL

Born 15 February 1998, (age 26) Place of birth King's Lynn, UK Race engineer Riccardo Musconi **Instagram** @georgerussell63

F1 HISTORY

Debut Australia 2019

Starts 104

Wins 1

Other podiums 10

Poles 1

Fastest laps 6

Best season 4th (2022)

2023 position 8th

After an impressive first year at Mercedes in 2022 – when he achieved his maiden GP win and out-scored his seventime world champion team-mate Hamilton – last year was a bumpier road for Russell. Unforced shunts in Canada and Singapore typified a season which, he admitted, never seemed to go to plan. 2023 also featured a couple of heated discussions with the pitwall about strategy vis à vis his team-mate. Two podiums were scant reward for his efforts.

2023 HIGHLIGHT

Despite struggling in qualifying, from 12th on the grid Russell drove superbly in Spain, taking third at the flag.



2023 LOW POINT

Running in third – and in with a shot of victory – in Singapore, Russell ended in the barriers on the final lap after he tapped the wall.

MERCEDES AT A GLANCE Debut France 1954 Races started 293 **Wins** 125

Poles 137

Fastest laps 105

Points 7.361.64

Drivers' titles 9

Constructors'

titles 8

TEAM INFO

Bases Brackley and Brixworth, UK

Chassis

F1 W15

Power unit

Mercedes M15 E

Website

Mercedesamgfl.com

Social media

@MercedesAMGF1

KEY PERSONNEL

CEO Markus Schäfer

Team principal

Toto Wolff

Technical director

James Allison

Sporting director

Ron Meadows

Chief engineer

Andrew Shovlin

LAST FIVE YEARS

2023 2nd

2022 3rd

2021 1st

2020 1st

2019 1st

FAST FACTS

Mercedes has scored points in 91.80% of the 293 races it has started since it first entered Formula 1 in 1954



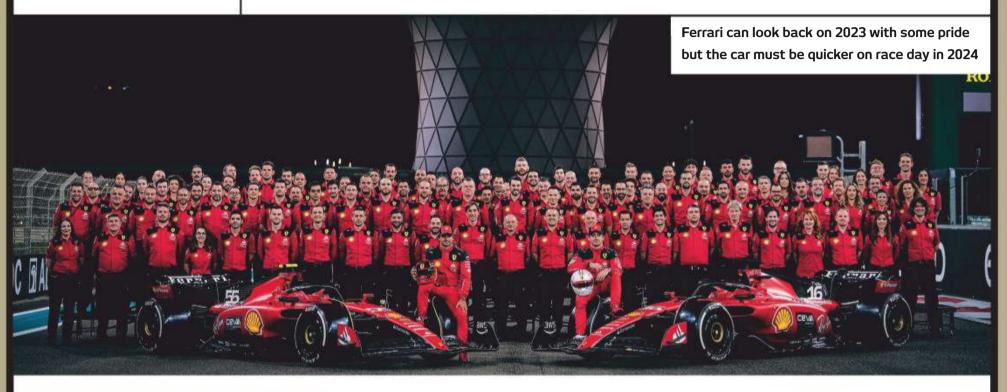
of Lewis Hamilton's six first-lap retirements in F1 have been at the Belgian GP, in 2009, 2012 and 2022

GARAGE 3 SCUDERIA FERRARI



A DREAM In Red

For this team anything other than winning is unacceptable – which is why a roasting from senior management as well as the fans beckons if this season brings more of the same





In 1988 Ferrari deprived McLaren of a clean sweep of wins when it won the Italian GP

Vasseur hasn't been broken by his first season as the man in charge of a national treasure





When the opportunity to win arose in Singapore, Sainz grabbed it with both hands

A tactical masterclass from

Carlos Sainz in Singapore provided the only break in Red Bull's hegemony in 2023, as history repeated itself; Ferrari had also been the sole interloper on McLaren's potential 1988 clean sweep, offering respite to those disenfranchised by foregone conclusions. And, if old F1 scripture continues to bear similarities to the current narrative, then there's a chance of a more competitive 2024... if Ferrari can achieve greater pace on Sundays.

The red cars were nifty in qualifying trim, particularly in Charles Leclerc's custody, but the ever-present hunger for Pirelli rubber cost the Scuderia in race trim. Charles scorched to five poles, three of those in the last five races, but his miserable pole-to-win conversion rate continued to shrink as he found himself winless in 2023.

As the oldest team on the grid,
Ferrari's storied history can often
appear to be a millstone around
its neck; although its current wait
for a drivers' championship win
is dwarfed by the 21-year drought
experienced between 1979 and
2000, it was last victorious with
Kimi Räikkönen back in 2007.
It's been a long time, and team
principal Frédéric Vasseur is keen to
ensure the next does not require an

equivalent aeon to accomplish.

Like Mercedes, the team shifted away from its own aero treatment to follow Red Bull's lead, although limited by the existing chassis infrastructure in place. A clean sheet for 2024 should allow it to make grander steps in its hunt for more victories, lest it continue to test the

2008

was the last season that Ferrari wor the constructors' championship frayed patience of its fervent tifosi.

But the team must be cautious not to throw the baby out with the bathwater. Ferrari was incredibly strong in slow, power-limited corners, and identified its weakness in the medium-speed areas – an area that it was strong in over 2022.

Its driving line-up remains strong, however, and Leclerc deserves a car more befitting of his prodigious abilities behind the wheel. With a more stable platform, his occasional moments of over-driving (such as in Miami qualifying) should subside. Sainz also demonstrated his tactical chops over 2023, something he'll need to rely on again this year.

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CHARLES LECLERC

Born 16 October 1997 (age 26) Place of birth Monte Carlo, Monaco Race engineer Xavier Marcos Padros Instagram @charles_leclerc

F1 HISTORY

Debut Australia 2018

Starts 123

Wins 5

Other podiums 25

Poles 23

Fastest laps 7

Best position 2nd (2022)

2023 position 5th

Reunited with his former Sauber boss Frédéric Vasseur, Leclerc appeared energised for his fifth season at Ferrari. But 2023 wasn't a particularly memorable one for him (despite the six podiums) as the Prancing Horse spent the season chasing its tail. Five poles reflected one-lap pace, but Leclerc appeared second best to Carlos Sainz after the summer break - until late developments made the car more to his liking. He'll want it to start like that this year.

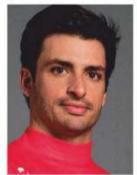
2023 HIGHLIGHT

Followed pole in Vegas with a strong race. Couldn't keep Max at bay, but re-passed Pérez for second on final lap.



2023 LOW POINT

His qualifying lap in Miami was curtailed after pushing too hard at the high-speed Marina sequence where he headed straight for the barriers.



CARLOS SAINZ

Born 21 September 1994 (age 29) Place of birth Madrid, Spain Race engineer Riccardo Adami Instagram @carlossainz55

F1 HISTORY

Debut Australia 2015

Starts 183

Wins 2

Other podiums 16

Poles 5

Fastest laps 3

Best position 5th (2021,2022)

2023 position 7th

Had a rather anonymous start to 2023 until Ferrari dialled out his car's edginess. Pole at Monza led to a terrific on-track duel with his team-mate in which Sainz emerged ahead. That good form continued with the win in Singapore, where he drove with maturity and guile. Ferrari's win was the only non-Red Bull grand prix triumph of last year. And Sainz's reward for this is being shown the door at the end of the 2024 season, to be replaced by Lewis Hamilton.

2023 HIGHLIGHT

Pole at Monza, followed by his Singapore win, trumped the achievements of anyone not in a Red Bull.



2023 LOW POINT

A two-lap restart in Melbourne resulted in another red flag as Sainz out-braked himself at Turn 1 and shunted into the back of Fernando Alonso.

RESULTS IN 2023 Total points scored 406 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

FERRARI At a glance

Debut Monaco 1950

Races started 1074

Wins 243

Poles 249

Fastest laps 259

Points 10,573.77

Drivers' titles 15

Constructors'

titles 16

TEAM INFO

Base Maranello, Italy

Chassis

Ferrari SF-24

Power unit

Ferrari 066/11

Website

ferrari.com

Social media

@ScuderiaFerrari

KEY PERSONNEL

CEO John Elkann

Team principal

Frédéric Vasseur

Technical director

(Chassis)

Enrico Cardile

Technical director

(Engine)

Enrico Gualtieri

Racing Director

Diego loverno

LAST FIVE YEARS

2023 3rd

2022 2nd

2021 3rd

2020 6th

2019 2nd

FAST FACTS

Both Carlos Sainz's two wins and four of Charles _eclerc's five victories have been from pole

Sainz and Leclerc will be team-mates for a fourth season. matching the period both Kimi Räikkönen and Sebastian Vettel, and Fernando Alonso and Felipe Massa spent together at Ferrari

GARAGE 4 McLAREN



WOKING UP TO A NEW DAWN

The future's bright – and still orange. After the latest in many management restructures over the past few seasons, McLaren seems to have found a winning formula again



In Norris and Piastri McLaren has one of the most exciting driver pairings on the grid

McLaren's new windtunnel at the team's Woking base is now fully operational





Stella can be proud of the way the team recovered after a dismal start to 2023

The greatest comeback since

Lazarus? McLaren's transformation from its Bahrain down-and-out performance to frequent podium botherer certainly suggests as much, although the early struggles had been forecast as early as 2022's French GP. An underwhelming update package there was the catalyst for the internal review which led the team to conclude its development direction was flawed and needed a course correction.

Although the MCL60's early showings were distinctly duller than its papaya livery wanted to portray, a series of upgrades turned the tide in battle. The first of those, in Baku, redefined its baseline, but the aerodynamic changes introduced in Austria were transformational. It was the shot in the arm that Lando Norris needed to snatch the lead from Max Verstappen at Silverstone, ultimately yielding the Briton's first podium of the season.

Under new team principal Andrea Stella, there was something in the water at McLaren. The team's renaissance after its lacklustre second spell with Honda looked to have run out of steam with 2022's regulatory changes, but it has arrested the slide. The signings of David Sanchez and Rob Marshall to bolster the technical line-up will offer more latitude for progression.

With an improved car, Norris showed what he's capable of. It wasn't quite enough to offer him a long-awaited first win, but he was able to mix it at the front of the pack on multiple occasions before Red Bull's unrelenting inevitability began to creep into races. 2021's Sochi race

2023

Lando Norris led five GPs in 2023, for a total of 30 laps

remains Norris's nearest miss, but a competitive car should end that wait provided he doesn't fluff his lines.

McLaren did manage a win in 2023, courtesy of Oscar Piastri's sprint victory in Qatar. The rookie proved every ounce worthy of the embittered tug of war with Alpine over his services and, although his race management fell short of Norris, this is something that will improve with experience.

2024 is an opportunity for McLaren to test itself against the best. With its new windtunnel online and one of F1's strongest driver pairings locked in to long-term deals, it can make the magic happen.

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LANDO NORRIS

Born 13 November 1999 (age 24) Place of birth Glastonbury, UK Race engineer Will Joseph **Instagram** @landonorris



Debut Australia 2019

Starts 104 Best result 2nd Podiums 13 Poles 1

Best position 6th (2021, 2023)

2023 position 6th

Fastest laps 6

The arrival of Piastri at McLaren gave the British driver a wake-up call but, to his credit, Norris raised his game to repel the threat from his rookie team-mate. The start of the year was a slog for the team, but from Austria onwards (a track where Norris traditionally excels) the MCL60 was a regular podium contender. In his fifth year with McLaren, Norris scored seven top-three finishes. His priority in 2024 is to stand on the top step of the podium and keep Piastri at bay.

2023 HIGHLIGHT

A stellar start at Silverstone propelled the home hero into the lead, much to the delight of the British crowd.



2023 LOW POINT

Running wide in Qatar qualifying led to a penalty and put him 10th on the grid - for a race he potentially



OSCAR PIASTRI

Born 6 April 2001 (age 22) Place of birth Melbourne, Australia Race engineer Tom Stallard **Instagram** @oscarpiastri

F1 HISTORY

Debut Bahrain 2023

Starts 22 Best result 2nd Podiums 2 Poles 0

Fastest laps 2

Best position 9th (2023)

2023 position 9th

A revelation in his first season. Piastri never seemed flustered when performances weren't going his way, confidently putting his shortcomings - in particular tyre management over a race distance - down to a lack of experience. Commandingly led his first laps in F1 in the Spa sprint and, when the MCL60's pace enjoyed a significant upswing from mid-season, Piastri took P1 in the Qatar sprint. McLaren has smartly signed him up beyond 2026.

2023 HIGHLIGHT

McLaren's first win since Monza in 2021 came at the hands of Piastri in Qatar's Saturday sprint race.



2023 LOW POINT

An impressive drive in the Spa sprint was overshadowed when he became embroiled in an avoidable shunt with Carlos Sainz on the opening lap of the grand prix.

had the pace to win. RESULTS IN 2023 Total points scored 302 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

FERRARI AT A GLANCE

Debut Monaco 1966

Races started 946

Wins 183

Poles 156

Fastest laps 164

Points 6,609.5

Drivers' titles 12

Constructors'

titles 8

TEAM INFO

Base Base Woking, UK

Chassis

McLaren MCL61

Power unit

Mercedes M15 E

Website

mclaren.com

Social media

@McLarenF1

KEY PERSONNEL

Chairman/CEO

Zak Brown

Team principal

Andrea Stella

Technical director

(Aerodynamics)

Peter Prodromou

Technical director

(Car concept)

David Sanchez

Technical Director (Engineering)

Rob Marshall

LAST FIVE YEARS

2023 4th

2022 5th

2021 4th

2020 3rd

2019 4th

FAST FACTS

in the Qatar sprint race saw him become only the fifth driver to win one of the 12 shortened events held so far

McLaren has the youngest driver line-up on the grid, followed by Williams

GARAGE 5 ASTON MARTIN



TURN BACK THE HANDS OF TIME

Unless Lance Stroll finds more pace and consistency, it'll be up to the evergreen 42-year-old Fernando Alonso to land big scores for Aston Martin



Alonso shared the first podium of 2023 with the Red Bull pairing of Verstappen and Pérez

Monaco was definitely Alonso's best chance of beating Verstappen in those early races





Stroll did well to even race in Bahrain after an off-season bike shunt fractured his wrists

It took little time for Aston

Martin to become the Isle of Fernando, after replacing one world champion [Sebastian Vettel] with another last season. When Alonso made his F1 comeback with Alpine in 2021, moments of brilliance had been too often restricted by the French team's inertia and unreliability. There might have even been doubts that Alonso no longer had "it", but those murmurs of dissent were quelled once he stepped into Aston's AMR23.

The Silverstone squad, in its third year under the guise of Britain's premier sportscar brand, had become a vastly improved force in

2023 – particularly in the first half of the year. The technical leadership of ex-Red Bull aero pharaoh Dan Fallows had helped birth a benignhandling car which enjoyed great performance in slow-speed corners. This underpinned vast investment from Lawrence Stroll, who had been supporting the team since purchasing the financially troubled Force India squad in 2018; Alonso's first-time-out podium in Bahrain seemed to justify that spend.

After the explosive start to 2023, performances dwindled slightly. Suggestions the team had to redesign its front end as part of a clampdown on moveable aero

couldn't be shaken off, while a chance to win in Monaco was lost after a mistimed tyre call as the heavens opened on the Cote d'Azur.

Wild experiments at the Austin and Mexico rounds took the shine off as the podium supply began to dry up, but Alonso responded with a Brazil masterclass in his

duel against Sergio Pérez to earn a rostrum return. The decade-long wait for a 33rd win could very well end - but only if Aston Martin's new Silverstone facilities can bear fruit.

Then there's the other car. Lance Stroll's drive in Bahrain, against the pain of fractured wrists sustained in a cycling accident on the eve of the season, was tremendous, but he was largely unable to make the most of the car at its most competitive moments. After whisperings the Canadian wasn't particularly dedicated to F1, including scurrilous rumours that he was about to pack up racing for tennis, he must rally against the backhanded remarks.

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FERNANDO ALONSO

Born 29 July 1981 (age 42) Place of birth Oviedo, Spain Race engineer Chris Cronin Instagram @fernandoalo_oficial

F1 HISTORY

Debut Australia 2001

Starts 377 **Wins** 32

Other podiums 74

Poles 22

Fastest laps 24

Titles 2 (2005, 2006)

2023 position 4th

At 42, Fernando Alonso shows no sign of slowing down. And in a car worthy of his talent, the two-time world champion remains a formidable opponent. Aston's remarkable speed at the start of 2023 enabled Alonso to score four podiums in the opening five races and in round six at Monaco he was just 0.084s off pole where a better executed pit strategy could have given him victory. Even though the pace slipped away as the year progressed, Alonso continued to excel.

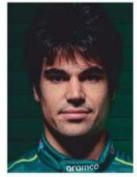
2023 HIGHLIGHT

His Interlagos drive, altering lines, saving battery and tyres, to repel Pérez - and then repass him - was a masterclass.



2023 LOW POINT

Getting needlessly exercised about a rumoured move to Red Bull – "there will be consequences", he complained on media day for the São Paulo GP.



LANCE STROLL

Born 29 October 1998 (age 25) Place of birth Montréal, Canada Race engineer Ben Michell Instagram @lance_strolli

F1 HISTORY

Debut Bahrain 2017

Starts 143

Best result 3rd Podiums 3

Poles 1

Fastest laps 0

Best season 10th (2023)

2023 position 10th

On occasion last year it looked as if Lance Stroll had had enough with F1. His body language and reticence in media interviews implied he was fed up. Regularly he would fail to progress from Q1 in qualifying, while team-mate Fernando Alonso was putting his Aston Martin comfortably into the top 10. At the end of the year the points gap highlighted the gulf in the two drivers' performances: fourth-placed Alonso scored 206 points, 132 more than Stroll.

2023 HIGHLIGHT

A gallant sixth place in the opening round after breaking a toe and fracturing his wrists in a mountain bike accident.



2023 LOW POINT

Shoving his trainer out of the way after another early qualifying exit in Qatar was an unproductive and unnecessary show of petulance.

RESULTS IN 2023 Total points scored 280 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

AT A GLANCE

Debut Holland 1959

Races started 71

Wins 0

Poles 0

Fastest laps 1

Points 412

Drivers' titles 0

Constructors'

titles 0

TEAM INFO

Base Silverstone, UK

Chassis

Aston Martin AMR24

Power unit

Mercedes M15 E

Website

astonmartinf1.com

Social media

@AstonMartinF1

KEY PERSONNEL

Chairman

Lawrence Stroll

Team principal

Mike Krack

Chief technical officer

Andrew Green

Technical director

Dan Fallows

Sporting director

Andy Stevenson

LAST FIVE YEARS

2023 5th

2022 7th

2021 7th

2020 *4th

2019 *7th

*as Racing Point

FAST FACTS

The team has led more races (3) as Aston Martin than it did as Racing Point (2), although Racing Point did win a race

Singapore was the second time Lance Stroll has failed to start a race having taken part in qualifying



RINGING IN THE CHANGES

Some might say Alpine missed a trick while redeveloping its Enstone factory recently. It failed to install a revolving door...

New team principal Bruno Famin has a job on his hands to move Alpine back up the order





Ocon and Gasly have supposedly put their previous falling-out behind them



Making sure Enstone (top) and Viry-Châtillon (above) work well together is crucial for Alpine

After reaching the dizzying

heights of fourth in 2022's constructors' championship, Alpine expected to climb even higher in 2023. But, instead of bridging the gap to the front-running teams, the team stagnated. A poor start to the year and internecine conflict at boardroom level rendered it a year featuring more managerial upheaval, as the power plays and under-bus hurling acts distracted from the on-track mediocrity.

Former grande fromage Laurent Rossi spontaneously combusted in his own hubris, accusing the team of dilettantism before being given the boot by Renault CEO Luca de Meo, but further changes were afoot. Team principal Otmar Szafnauer was moved on after just a year and a half in the role, accompanied though the exit door by the long-serving Alan Permane. The veritable feast of management changes was followed by a (Bruno) Famin, the ex-Peugeot Sport man who was installed as vice president of Alpine Motorsport — reporting to former Ferrari chief Philippe Krief.

Part of Famin's remit is to create a more harmonious relationship between the race team's Enstone facilities and engine department in Viry-Châtillon. The wild unreliability (at least, by modern standards) of 2022 was largely ironed out after redesigning the powertrain's water pump, but there's still a sense of uncertainty with the Renault power unit. Much of the focus at Viry is now on getting 2026 right.

If Famin can manage that, then he'll be able to smooth over the quietly contentious relationship between drivers Pierre Gasly and Esteban Ocon. It's well known that the two aren't the best of friends

PIERRE GASLY

has finished in the points in every Belgian and Saudi Arabian GP he and, though they've largely managed to keep it cordial over their first year together as team-mates, occasional clashes and on-track decisions have produced a few flare-ups. Otherwise, they've been very closely matched — Ocon with a barely significant edge in the races, Gasly marginally the quicker of the two in qualifying.

The question around Alpine is regarding its relative inertia compared with the other outfits. Does it have what it takes to actually become a frontrunner? Or is it destined to look nervously behind it and await a possible push from RB or Williams, like it did with Aston Martin and McLaren last year?

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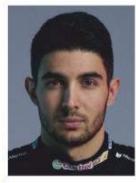
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ESTEBAN OCON

Born 17 September 1996 (age 27) Place of birth Évreux, France Race engineer Josh Peckett Instagram @estebanocon

F1 HISTORY

Debut Belgium 2016

Starts 133 Wins 1

Other podiums 2

Poles 0

Fastest laps 0

Best season 8th (2017, 2022)

2023 position 12th

There was concern whether the reuniting of childhoodfriends-turned-enemies would impact Alpine's on-track success. Although they didn't clash deliberately, there were two incidents last year when Ocon and team-mate Pierre Gasly took each other out: Australia and the first corner in Hungary. Given the strife going on elsewhere at Alpine, it would be beneficial for them to keep their noses clean. Ocon lost out to Gasly by four points and will want to reverse that.

2023 HIGHLIGHT

Monaco is the closest to a home race for Ocon and he delivered a brilliant performance in the wet to take third.



2023 LOW POINT

The year started badly when he picked up three penalties in the season opener in Bahrain - including speeding in the pitlane.



PIERRE GASLY

Born 7 February 1996 (age 28) Place of birth Rouen, France Race engineer John Howard Instagram @pierregasly

F1 HISTORY

Debut Malaysia 2017

Starts 130

Wins 1

Other podiums 3

Poles 0

Fastest laps 3

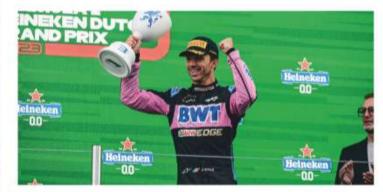
Best season 7th (2019)

2023 position 11th

The switch from the Red Bull junior programme (and AlphaTauri) to Alpine appeared to give Gasly a new lease of life. The one-time Italian GP winner quickly settled into his new home, alongside his long-time Normandy nemesis. But dig beneath the surface and the cracks are there. At Suzuka he was asked to relinquish ninth to Ocon and made his fury known to the management, which was still reeling from the sudden departure of its team principal and sporting director.

2023 HIGHLIGHT

Gasly drove superbly in Holland and, when Pérez was struck with a time penalty, he inherited third.



2023 LOW POINT

Heading towards the first corner on the opening lap in Hungary there was contact that eliminated both Alpine cars on the spot.

RESULTS IN 2023 Total points scored 120 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

ALPINE At a glance

Debut Britain 1977

Races started 466

Wins 36

Poles 51

Fastest laps 33

Points 2,105

Drivers' titles 2

Constructors'

titles 2

TEAM INFO

Base Enstone, UK

& Viry, France

Chassis Alpine A524

Power unit

Renault E-Tech RE24

Website

alpine-cars.co.uk/

f1-team

Social media

@AlpineF1Team

KEY PERSONNEL

CEO Philippe Krief

Team principal

Bruno Famin

Technical director

(Enstone)

Matt Harman

Technical director (Viry)

Eric Meignan

Sporting director

Julian Rouse

LAST FIVE YEARS

2023 6th

2022 4th

2021 5th

2020 *5th

2019 *5th

*as Renault

FAST FACTS

If there had been a championship for sprint races in 2023, Alpine's finishing position would have been sixth, the same as in the constructors' race

In qualifying third in Monaco Ocon matched his previous best grid slot, which he achieved twice for Force India

ONWARDS AND UPWARDS

Ambition is the key word for Williams under its new regime. This isn't a team happy to make up the numbers - but the rebuild is taking time

In his first season as team principal James Vowles has kickstarted Williams back into life





Vowles was able to tempt Pat Fry from Alpine to head up the team's technical department



The FW45 was quick in a straight line but coped well at more technical tracks like Zandvoort

When James Vowles walked through reception on his first day as team principal at Williams, it became apparent that the creature comforts he was used to at Mercedes weren't necessarily present at Grove. He estimated that some equipment and software in use were almost two decades old, hardly befitting a team that had once perched upon F1's technological cutting edge. Years of underinvestment had taken their toll, but recovery signs are increasing in strength.

A successful rally against capital expenditure rules gave Williams more leeway to pump cash into overhauling its geriatric systems,

but there's also been important movements on the personnel side. Ex-Alpine man Pat Fry was swayed by Vowles' ambition (and Alpine's apparent lack thereof) to head up the engineering department. Given the team's track record with a Pat(rick) in charge of technical matters, it bodes well for the future.

The perception of Williams' 2023 package – the FW45 – was that it was only good in a straight line. After all, the team scored its high-water mark of seventh at the drag-sensitive locales of Montréal and Monza, but in truth it was a much less one-dimensional car compared with the previous year's. Alex Albon capitalised on conditions at the technical Zandvoort circuit to deliver eighth – and had looked good at Melbourne before crashing.

Albon's defensive efforts in 2023 had earned him multiple plaudits, as he continues his reputational rebuild following that bruising yearand-a-bit at Red Bull a few seasons ago. There's more to him than the "Great Wall of Albon" tag, as he's

become a key focal point of the team over the past two seasons and has been responsible for delivering the headline results. His year contrasted greatly with that of Logan Sargeant, whose promotion from F2 was fraught with mistakes. Logan's run of crashes after the summer break briefly put a second season in doubt.

With investment from Dorilton Capital, which bought the team from the Williams family in 2020, it has pulled away from the nadir of the 2019-20 period with steady growth and shrewd hiring. There's a long way to go until the team returns to be one of F1's juggernauts, but it's very much a work in progress.

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ALEX ALBON

Born 23 March 1996 (age 27) Place of birth London, UK Race engineer James Urwin **Instagram** @alex_albon

F1 HISTORY

Debut Australia 2019

Starts 81 Best result 3rd Podiums 2 Poles 0

Fastest laps 0

Best season 7th (2020) **2023 position** 13th

Under the stewardship of team principal James Vowles, Alex Albon has been encouraged to blossom at Williams - in contrast to his previous team Red Bull, where he wilted. It partly explains how he was able to amass 27 points for the team in 2023, lifting Williams to seventh in the constructors' championship. It's hard to find a nicer, friendlier driver than Albon in top-class racing. Another strong year might even put him in the frame for that vacant Mercedes seat...

2023 HIGHLIGHT

Albon won the fan-voted 'driver of the day' for seventh in Canada with a gutsy one-stop performance on old tyres.



2023 LOW POINT

Running an impressive sixth in Australia, his GP came to an abrupt end when he hit the wall and brought out the first of the three red flags in the race.



LOGAN SARGEANT

Born 31 December 2000 (age 23) Place of birth Fort Lauderdale, USA Race engineer Gaëtan Jego **Instagram** @logansargeant

F1 HISTORY

Debut Bahrain 2023

Starts 22 Best result 10th Podiums 0

Poles 0

Fastest laps 0

Best season 21st (2023)

2023 position 21st

Sargeant struggled to make an impact in his first season in Formula 1 and has occasionally looked anonymous (indeed, during a press conference early on, other drivers present noisily talked among themselves while he was fielding a question). Although there's no doubting how hard he works, his future could be in doubt unless he starts to get much closer to his team-mate. That starts with better qualifying performances, then more top-ten finishes.

2023 HIGHLIGHT

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Sargeant finally scored his first point at his home race in Austin, but only after two in the top 10 were disqualified.



2023 LOW POINT

He suffered a number of shunts, but going off twice during the Dutch GP weekend (during qualifying and then the race itself) was a bad look.

RESULTS IN 2023 Total points scored 28 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

WILLIAMS AT A GLANCE

Debut Argentina 1975

Races started 815

Wins 144

Poles 128

Fastest laps 133

Points 3,626

Drivers' titles 7

Constructors'

titles 9

TEAM INFO

Base Grove, UK

Chassis

Williams FW46

Power unit

Mercedes M15 E

Website

williamsf1.com

Social media

@WilliamsRacing

KEY PERSONNEL

Chairman/CEO

Matthew Savage

Team principal

James Vowles

Chief technical

officer Pat Fry

Sporting director

Sven Smeets

Chief engineer

Dave Robson

LAST FIVE YEARS

2023 7th

2022 10th

2021 8th

2020 10th

2019 10th

FAST FACTS

Seventh in the constructors' championship in 2023 was the highest Williams has finished since 2017

Logan Sargeant's best qualifying of sixth on the grid in Las Vegas was only the second time he made it through to Q3 in 2023

GARAGE 8 VCARB



THIRD TIME PLUCKY

Three forms the soul to a positive sum – or so the song goes. And that's what Red Bull's second team will be hoping as it takes on its third new identity



Ricciardo returned to a race seat fully refreshed when he replaced Nyck de Vries

New boys at a 'new' team. Bayer (left) and Mekies are VCARB's CEO and team principal





Like all of the teams on the grid, VCARB has chosen to retain its end of 2023 line-up for '24

So long, AlphaTauri. The team formerly known as Minardi has now assumed its third new guise since Red Bull bought out the Italian squad at the end of 2005; it spent 14 seasons as Toro Rosso before the Red Bull-owned AlphaTauri fashion arm became the garb of choice for the cars from 2020 through to 2023.

The rebranding exercise appears to have been a case of selecting short and generic to cram as many title-sponsor nouns in as possible: Visa Cash App RB F1 Team appears on the official entry list – or RB for short, if you don't wish to give the finance giants too much credit. The new name will invite myriad puns

over the season, especially if one driver doesn't make it through the year contactless...

Although divisive, the renaming of the team isn't entirely superfluous. The identity change follows the outfit's repositioning away from the junior-team model it followed for 17 years. A closer tie-up with the lead Red Bull team has resulted in some technical operations moving away from Faenza to the Red Bull Technologies campus in Milton Keynes. This follows the installation of a new management structure to succeed the retiring Franz Tost, as ex-Ferrari man Laurent Mekies becomes the new team principal,

flanked by Peter Bayer as CEO.
Then there's the signings of Tim
Goss, Guillaume Cattelani and
Alan Permane, showing that Red
Bull's parent company isn't willing
to persist with the usual brand of
middling performances.

After the mid-season swap between Nyck de Vries and Daniel Ricciardo in 2023 (with Ricciardo later deputised for by Liam Lawson after breaking his hand), the team

The number of GPs that took place between Danie Ricciardo's last race for Toro Rosso and his first

retains a settled line-up for this year.
Ricciardo was invigorated by his
six-month break out of a full-time
F1 drive after leaving McLaren, with
some genuinely impressive drives
either side of his later five-race
layoff. His arrival has helped Yuki
Tsunoda step up as the Japanese
driver rises to the challenge. He
knows that if he beats Ricciardo, a
Red Bull drive could be up for grabs,
and must pick up where he left off
after a scintillating performance at
the Abu Dhabi finale.

With a reinvigorated structure and a strong line-up, Visa Cash App RB will certainly court much in the way of interest over 2024...

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DANIEL RICCIARDO

Born 1 July 1989 (age 34) Place of birth Perth, Australia Race engineer Pierre Hamelin **Instagram** @danielricciardo

F1 HISTORY

Debut Britain 2011

Starts 239

Wins 8

Podiums 24

Poles 3

Fastest laps 16

Best season 3rd (2014, 2016)

2023 position 17th

The career of the eight-time GP winner looked to be over when he departed McLaren at the end of 2022. Invited back into the Red Bull fraternity, Dan got a sudden reprieve when Nyck de Vries was dropped. At Zandvoort, his third race back, Ricciardo was unlucky to come across Oscar Piastri in the middle of the road and in avoidance he broke a bone in his left hand when he hit the barriers. Could 2024 be the start of one day returning to the Red Bull A-team?

2023 HIGHLIGHT

Showed just why he was brought back to AlphaTauri when he qualified fourth and finished sixth in Mexico.



2023 LOW POINT

Ricciardo was unlucky to get hit by a tyre at the start of the race in Brazil and, when he resumed after the red flag, was immediately classfied as being a lap down.



YUKI TSUNODA

Born 11 May 2000 (age 23) Place of birth Sagamihara, Japan Race engineer Mattia Spini **Instagram** @yukitsunoda0511

F1 HISTORY

Debut Bahrain 2021

Starts 63

Best result 4th

Podiums 0

Poles 0

Fastest laps 1

Best season 14th (2021, 2023)

2023 position 14th

At the start of his F1 career, the diminutive Japanese driver admitted he'd rather play video games than go to the gym. Long-time team principal Franz Tost was instrumental in instilling some discipline into him, so it was an emotional final race of the season when Yuki said farewell to the departing Tost. Despite support from Honda, it will be interesting to see how he fares under the new management of team principal Laurent Mekies and CEO Peter Bayer.

2023 HIGHLIGHT

At the final race of the year, Tsunoda became the first Japanese driver to lead a lap since Takuma Sato in 2004.



2023 LOW POINT

A poor start in Austria led to Tsunoda breaking his front wing at Turn 1, before going on to lock up and slide into the gravel at Turn 4.

RESULTS IN 2023 Total points scored 25 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

VCARB AT A GLANCE

Debut Bahrain 2006

Races started 329

Wins 2

Poles 1

Fastest laps 2

Points 784

Drivers' titles 0

Constructors'

titles 0

TEAM INFO

Base Faenza, Italy Chassis VCARB 01

Power unit

RBPT-H003

Website

visacashapprb.com

Social media

@visacashapprb

KEY PERSONNEL

CEO Peter Bayer

Team principal

Laurent Mekies

Chief technical officer

Tim Goss

Technical director

Jody Egginton

Racing director

Alan Permane

LAST FIVE YEARS

2023 *8th

2022 *9th

2021 *6th

2020 *7th

2019 **6th

*as AlphaTauri

**as Toro Rosso

FAST FACTS

AlphaTauri led 31 laps across two GPs during its short, four-year existence

Yuki Tsunoda has scored points 17 times from his 63 GP starts, seven of those efforts coming in his first season in F1 in 2021



THE IDENTITY PARADE

Sauber is flying under new colours before Audi officially arrives in 2026, with an official title which may vary from race to race. Confused? You bet...

Bottas and Guanyu have been retained by the team as it heads towards its switch to Audi





James Key is back with the Swiss team, 12 years after ending a two-year spell there



After a reasonable 2022, the Alfa Romeos struggled and spent 2023 in the lower midfield

button. Sauber's Alfa Romeo deal expired last year and the team sought an interim solution before it becomes Audi in 2026. It's trading under the Stake F1 Team Kick Sauber name, but the official nomenclature will vary between events. For most it will roll as Stake but, where local legislation frowns on advertising crypto-betting, it will change identity to Kick (a streaming

Another team to hit the rebrand

Following on from a bright 2022, the Hinwil outfit regressed in 2023 as the car lacked downforce and upgrades didn't deliver the requisite leaps forward relative to

service owned by Stake's founders).

other teams. The relative stagnation led to the hiring of James Key as technical chief, the Briton returning for a second spell in Switzerland after departing McLaren early in 2023. For a team that has often struggled to tempt engineering staff away from the UK, this is good news for Sauber as it can bank outside knowledge in its efforts to progress.

The perception is that 2024 and 2025 will be nothing more than interim years until the full Audi project comes online for 2026, but the German brand will still be expecting success in that time as it lays the foundations for a full works effort. In the 30 years the team has

been on the grid (under various guises) it has won once, with Robert Kubica at the 2008 Canadian GP, and that's unlikely to change for the time being. But that's not to say the team can't overachieve if it gets its 2024 design right.

Valtteri Bottas remains team leader, as he casts a much more carefree figure in his life post-Mercedes. With a newly accrued penchant for exposing his bare

There are only three races on the 2024 calendar, Las Vegas Qatar and Miami that Valtteri Bottas hasn't won or been on the codium at

backside in a photographic medium, there's certainly the potential for a "rump Stake" pejorative to be thrown his way. Despite his personal life exhibiting a more unchained nature, he's still a very fierce competitor — and the same driver who was capable of matching Lewis Hamilton on occasion at Mercedes. His team-mate Zhou Guanyu has earned a third season at the squad, as F2 champion Théo Pourchaire settles in for another year as reserve.

If the changes to the technical team bear fruit, just how high will the Stakes rise? Or will 2024 Kick those future aspirations into touch?

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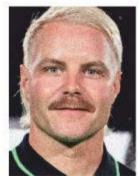
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VALTTERI BOTTAS

Born 28 August 1989 (age 34) Place of birth Nastola, Finland Race engineer Alex Chan **Instagram** @valtteribottas

F1 HISTORY

Debut Australia 2013

Starts 222

Wins 10

Other podiums 57

Poles 20

Fastest laps 19

Best season 2nd (2019, 2020)

2023 position 15th

Following his years at Mercedes, where he scored 10 F1 wins, Bottas reinvented himself with a switch to the Swiss-based Sauber team in 2022. Sadly, though, the past two years have produced only a handful of points (just 10 scored last year). On the horizon is a fully fledged assault under the ownership of Audi. Is Valtteri gambling on a seat for 2026? He'll be 36 by that time, so the Audi operation will be weighing up its options and could decide on hiring up-and-coming talent

2023 HIGHLIGHT

Bottas finished a respectable eighth in Qatar, finally converting one of his five top 10 starts into points.



2023 LOW POINT

In Suzuka Bottas was squeezed on the opening lap by Ocon and hit Albon to his left, and was then collected by Sargeant on lap 5 before eventually retiring on lap 9.



ZHOU GUANYU

Born 30 May 1999 (age 24) Place of birth Shanghai, China Race engineer Jörn Becker Instagram @zhouguanyu24

F1 HISTORY

Debut Bahrain 2022

Starts 44

Best result 8th

Podiums 0

Poles 0

Fastest laps 2

Best season 18th (2022, 2023)

2023 position 18th

Going into 2024, the Chinese driver still retains close links with his Sheffield roots. When Zhou first came to the UK he competed in karting for Strawberry Racing, based in the city, and still has former Manor Motorsport chief Graeme Lowdon and consultant Marc Hynes as mentors. It's a big year for Guanyu, as he races in his home city of Shanghai for the first time, since the Chinese GP returns to the schedule after being 'parked' during the Covid-19 pandemic.

2023 HIGHLIGHT

Last year began strongly when Guanyu recorded the second of his two F1 fastest laps, in the Bahrain GP.



2023 LOW POINT

After a software glitch squandered his impressive fifth-place start in Hungary, he hit the brakes too late at Turn 1 and caused a shunt.

IN 2023 Total points scored 16 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNFs**

STAKE AT A GLANCE

Debut

South Africa 1993

Races started 463

Wins 1

Poles 1

Fastest laps 5

Points 865

Drivers' titles 0

Constructors'

titles 0

TEAM INFO

Base Hinwil,

Switzerland

Chassis

Stake C44

Power unit

Ferrari 066/11

Website

stakef1.team

Social media

@stakeflteam

KEY PERSONNEL

CEO

Andreas Seidl

MD and team

representative

Alessandro Alunni Bravi

Technical director

James Key

Sporting director

Beat Zehnder

Chief engineer

Xevi Pujolar

LAST FIVE YEARS

2023 8th*

2022 6th*

2021 9th*

2020 8th*

2019 8th*

*as Alfa Romeo

FAST FACTS

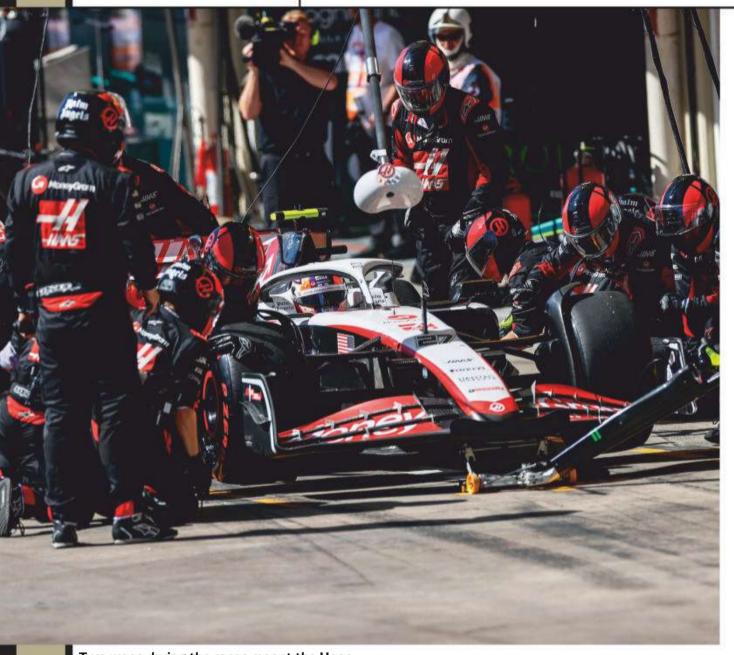
The team's three fastest laps as Sauber were achieved by different drivers

Zhou Guanyu hasn't scored the extra point for either of his two fastest laps in F1 as he finished 16th on both occasions



HOME OF THE BRAVE

It was a big call for US racing magnate and team owner Gene Haas to 'let go' of team architect Guenther Steiner in the off-season. But was it the right one?



Ayao Komatsu with Magnussen. Komatsu has stepped up to team principal to replace Steiner





Haas also promoted Andrea de Zordo from within to be the team's new technical director

Tyre woes during the races meant the Haas cars were usually in the pits earlier than most

Here today, Guenther 'morrow; Haas embarks upon its first season without Guenther Steiner at the helm after a decade at the team. Owner Gene Haas, feeling that the team could be doing more with the resources it already had, has split with the irrepressible Steiner and his Netflix-curated aura of f-bombs and outspokenness. Ayao Komatsu now steps up as team principal, having agreed with Haas's vision of retaining its Ferrari links and relying on the current structure rather than investing into its own. Steiner, as an advocate for the team becoming more autonomous, found his contract unrenewed.

After a dismal 2023, something had to change. The car was decent in qualifying, especially under Nico Hülkenberg's superintendence, but the VF-23 burned through tyres pretty early on during the races. The drivers were treading on eggshells in the early phases as a result, which made points increasingly difficult to come by – and the progress of others relative to Haas ensured it was rooted to the bottom of the constructors' standings. Anticipation over the team's Austin upgrade was strangely anti-climactic, since it did little to improve the situation.

For the first time in three years, there's continuity on the driving

front. Hülkenberg's full-time return to F1 was impressive when the car was less of a limiting factor; second in Canadian GP qualifying (prepenalty) was a clear highlight. Kevin Magnussen struggled more with the overall package and chalked up just three points, but at least made it into the top 10 more than his team-mate.

Technical chief Simone Resta has

also left, to be replaced by Andrea de Zordo, who has been at Haas since 2021. Komatsu has a job on his hands to unify the UK base and Italian design operations and, although he has stated the new car is a step forward, has alluded to further progress being needed early in the year to move away from the rear of the order.

Life at Haas post-Steiner will court a few voyeuristic gazes, since many will be curious to see how the team copes without its figurehead and main selling point in the media. If the tyre-killing properties of the old car remain, it's likely to be another tough year.

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KEVIN MAGNUSSEN

Born October 1992 (age 31) Place of birth Roskilde, Denmark Race engineer Mark Slade **Instagram** @kevinmagnussen

F1 HISTORY

Debut Australia 2014 **Starts** 163 Best result 2nd Podiums 1 Poles 1

Fastest laps 2 Best season 9th (2018) 2023 position 19th

After leaving Haas at the end of 2020, K-Mag seemed content with the idea of shifting his career to North America and enjoying high-performance sports cars in IMSA. But when Haas needed a driver at short notice, the popular Dane was given a lifeline back to F1 with his old team at the start of 2022. How much longer Magnussen will continue in grand prix racing partly depends on the direction the team takes now Guenther Steiner is no longer steering the ship.

2023 HIGHLIGHT

In Bahrain K-Mag started 2023 on a high with 10th, having prevailed in an entertaining scrap with Yuki Tsunoda.



2023 LOW POINT

Magnussen caused two red flags in races last year, both due to big shunts. The first was in Melbourne and the



NICO HÜLKENBERG

Born 19 August 1987 (age 36) Place of birth Emmerich, Germany Race engineer Gary Gannon Instagram @hulkhulkenberg

F1 HISTORY

Debut Bahrain 2010

Starts 203 Best result 4th Podiums 0 Poles 1

> Fastest laps 2 Best season 7th (2018) **2023 position** 16th

After more than a decade racing in F1, Hülkenberg looked set to be relegated to the part of super-sub - that was until Haas picked up the phone. The team wanted to move away from its choice of rich youngsters and called upon Nico to form an experienced line-up alongside Magnussen. He was able to show his speed in qualifying but, like his team-mate, struggled with the car's appetite for tyres. His future is also uncertain given the recent regime change at Haas.

2023 HIGHLIGHT

Second fastest in Canadian GP qualifying and fourth on the grid for the Austrian sprint showed Nico's still got it.



2023 LOW POINT

A slow start in São Paulo left the Hülk squeezed at Turn 1 between his team-mate and Alex Albon's Williams,

second in Mexico. with unfortunately messy results. RESULTS IN 2023 Total points scored 12 1st place 2nd place 3rd place Points-scoring races Pole positions Fastest laps **DNF**s

HAAS AT A GLANCE

Debut Australia 2016

Races started 166

Wins 0

Poles 1

Fastest laps 2

Points249

Drivers' titles 0

Constructors'

titles 0

TEAM INFO

Base Banbury, UK; Kannapolis, USA, Varano and

Maranello, Italy

Chassis

Haas VF-24

Power unit

Website

haasflteam.com

Ferrari 066/11

Social media

@HaasF1Team

KEY PERSONNEL

Chairman

Gene Haas

Team principal

Ayao Komatsu

Technical director

Andrea de Zordo

Team manager

Peter Crolla

Performance director

Damien Brayshaw

LAST FIVE YEARS

2023 10th

2022 8th

2021 10th

2020 9th

2019 9th

FAST FACTS

only seasons in Haas's F1 history that Kevin Magnussen hasn't been one of its drivers

2.509s

How far Hülkenberg was from third at the 2012 Belgian GP. His record of races without a podium is now 203



- OUR "PARADISE" surroundings have recently become a UNESCO geopark!
- Watch the onboard video on our web site, turn on the music . . . get the vibe!
- + TOP QUALITY EXCLUSIVE TESTING FROM 4K€ per day
- + VIP EVENTS OUR SPECIALITY + 24 HOUR TESTS
- + CONFIDENTIAL TESTING/FILMING + OUR FAMOUS SAFARI TOURS!

PLUS OUR TOTAL PASSION & DEDICATION



www. guadixcircuit.com

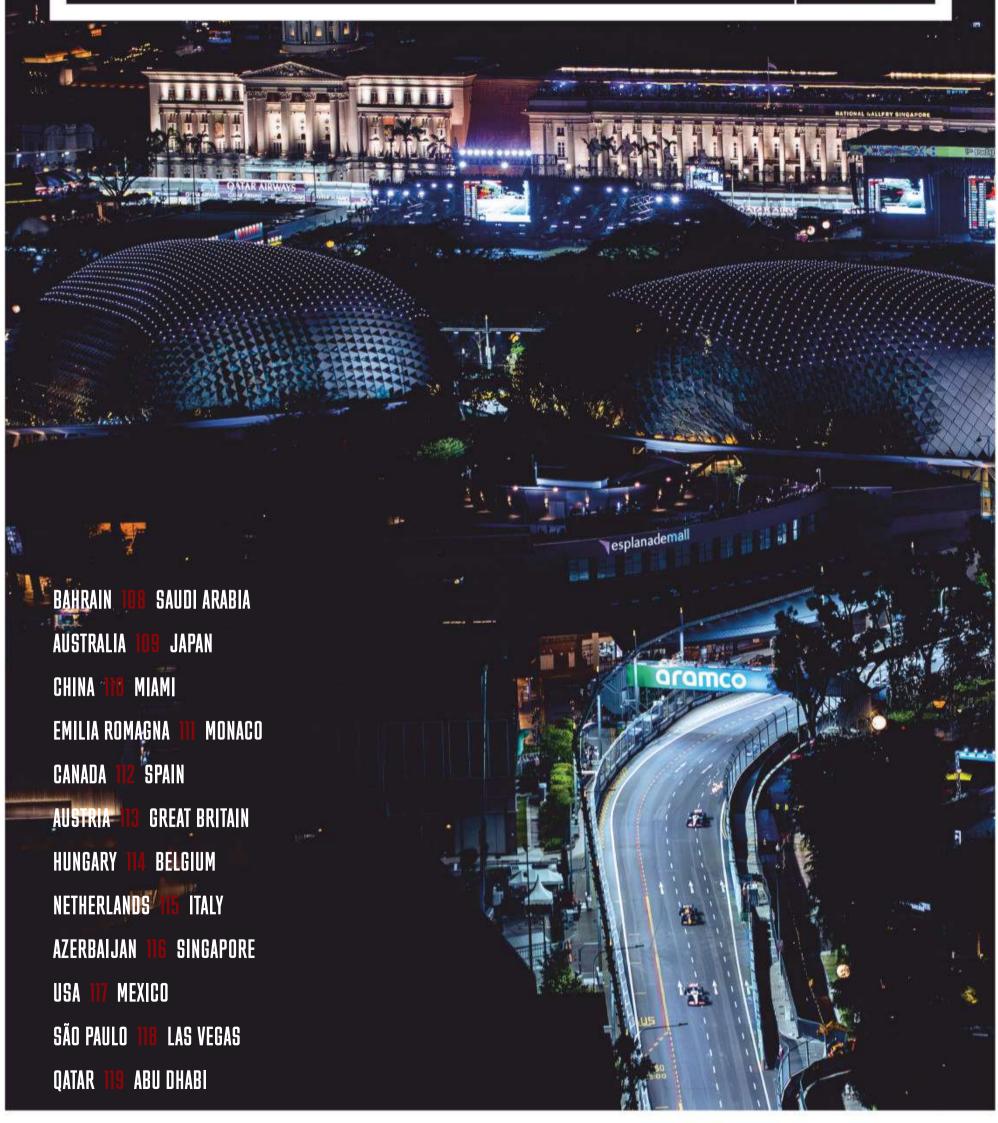
GRANADA / SPAIN.



CIRCUITS 2024

Shuffle up! China rejoins the running order for the first time since 2019 as Formula 1 embarks on its biggest and most ambitious calendar ever





ROUND 1/24 Bahrain Sakhir, 29 February-2 March





RACE DATA

Circuit name

Bahrain International Circuit

First GP 2004

F1 races held 19

Laps 57

Circuit length 3.362 miles

Race distance

191.530 miles

Direction Clockwise

Winners from pole 9

Race start (UK time) 3pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

11.987s

Fastest lap 1m33.996s,

Zhou Guanyu

Race leaders 2

Pitstops 52

Overtakes 22

ROUND 2/24 Saudi Arabia Jeddah, 7-9 March





LAST RACE

HERE (2023) Winner

(Red Bull) Margin of victory

Fastest lap

1m31.906s

Race leaders 2

Pitstops 24

Overtakes 35

NEED TO KNOW

The fourth GP to be held next to the Red Sea will also be a Saturday night race owing to the start of

Ramadan on 10 March. The self-proclaimed 'world's fastest street circuit' has produced some dramatic racing, notably the duel between Max Verstappen and Charles Leclerc in 2022, and the track can be a harumscarum ride with fast corners lined by concrete barriers. This year there will be a spectacular drone light show before the start of the race, and the event will host the first race in the revamped all-female F1 Academy series.

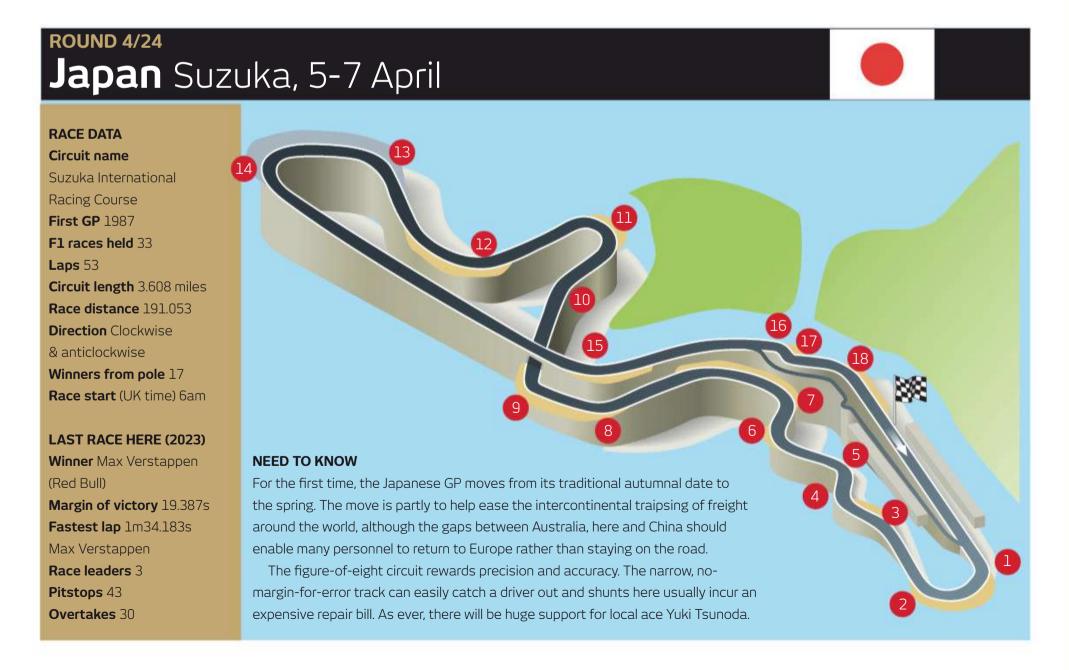
Circuit

First GP 2021 F1 races held 3 Laps 50 Circuit length

Race distance 191.662 miles Direction

Winners from pole 2 Race start





ROUND 5/24

China Shanghai, 19-21 April



RACE DATA

Circuit name

Shanghai International Circuit

First GP 2004

F1 races held 16

Laps 56

Race distance

189.559 miles

Direction clockwise

Winners from pole 9

Race start (UK time) 8am

LAST RACE HERE (2019)

Winner Lewis Hamilton

(Mercedes)

Margin of victory 6.552s

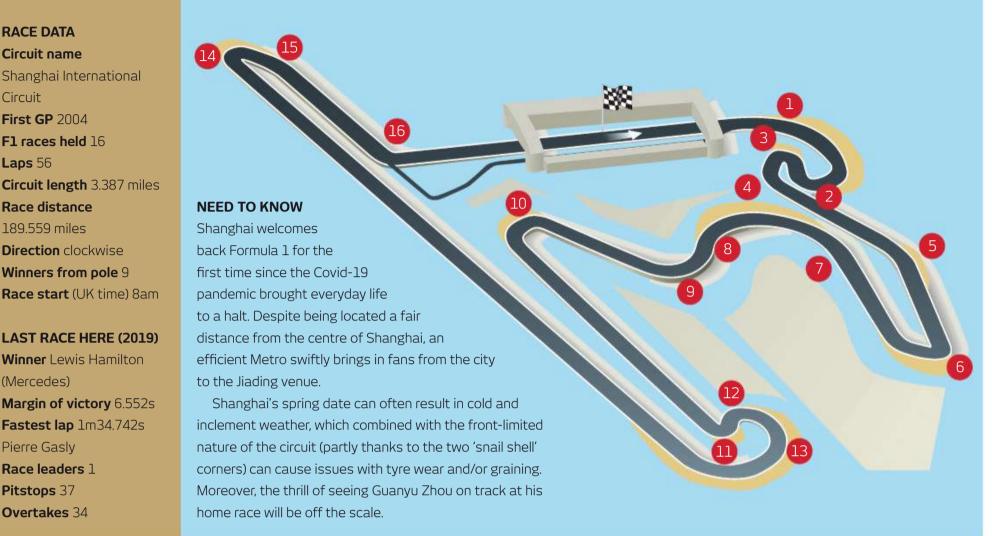
Fastest lap 1m34.742s

Pierre Gasly

Race leaders 1

Pitstops 37

Overtakes 34



ROUND 6/24

Miami Miami Gardens, 3-5 May



NEED TO KNOW

In its first two years of hosting a GP, Miami has established itself as a different proposition to the mainstay Austin and upstart Las Vegas. Combining good racing, live music, great food and the warm South Beach sunshine, the race

around the Dolphins' Hard Rock Stadium home denotes the unofficial start of the motorsport summer season.

It caters for all types of fan: from the die-hard enthusiast, to the first-timer, to those who enjoy tacos by the side of the track or want to experience a taste of South Florida.

RACE DATA

Circuit name

Miami International

Autodrome

First GP 2022

F1 races held 2 **Laps** 57

Circuit length 3.362 miles

Race distance

191.584 miles

Direction Anticlockwise

Winners from pole 0

Race start (UK time) 9pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory 5.384s

Fastest lap 1m29.708s

Max Verstappen

Race leaders 2

Pitstops 20

ROUND 7/24

Emilia Romagna Imola, 17-19 May

NEED TO KNOW

Twelve months ago the Emilia Romagna GP was cancelled at the last minute due to the floods that hit this beautiful region of Italy. In addition to impacting staff from both local teams AlphaTauri and Ferrari, the deluge meant access to Imola was severely restricted.

This year's race will be tinged with sadness, since it will mark the 30th anniversary of the tragic deaths of Roland Ratzenberger and Ayrton Senna here. It's the first race of the European season so the paddock will be reunited with the teams' motorhomes, back on the road serving up delicacies for guests.



RACE DATA

Circuit name

Autodromo Enzo

e Dino Ferrari

First GP 1980

F1 races held 30

Laps 63

Circuit length 3.050 miles

Race distance

192.033 miles

Direction Anticlockwise

Winners from pole 10

Race start (UK time) 2pm

LAST RACE HERE (2022)

Winner

Max Verstappen (Red Bull)

Margin of victory 16.527s

Fastest lap 1m18.446s

Max Verstappen

Race leaders 1

Pitstops 25

Overtakes 13

ROUND 8/24

Monaco Monte Carlo, 24-26 May

RACE DATA

Circuit name

Circuit de Monaco

First GP 1950

F1 races held 69

Laps 78

Circuit length 2.073 miles

Race distance

161.734 miles

Direction Clockwise

Winners from pole 31

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

27.921s

Fastest lap 1m15.650s

Lewis Hamilton

 $\textbf{Race leaders} \ 1$

Pitstops 37

Overtakes 13

Ah... the sunny place for shady people: round the houses, past the yachts, through the tunnel and a quick wave to Prince Albert in the royal box as you pass by. More than ever, Monaco feels like the parody created by the late Peter Ustinov in his *Grand Prix of Gibraltar* skit. Arguably outdated and processional, it retains the capacity to surprise and confound drivers and strategists. Last year was no exception when a heavy rain shower doused the track around the hairpin, but it remained dry on the other side of the harbour.

ROUND 9/24

Canada Montréal, 7-9 June





RACE DATA

Circuit name

Circuit Gilles Villeneuve

First GP 1978

F1 races held 42

Laps 70

Circuit length 2.709 miles

Race distance

189.685 miles

Direction Clockwise

Winners from pole 21

Race start (UK time) 7pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

9.570s

Fastest lap 1m14.481s

Sergio Pérez

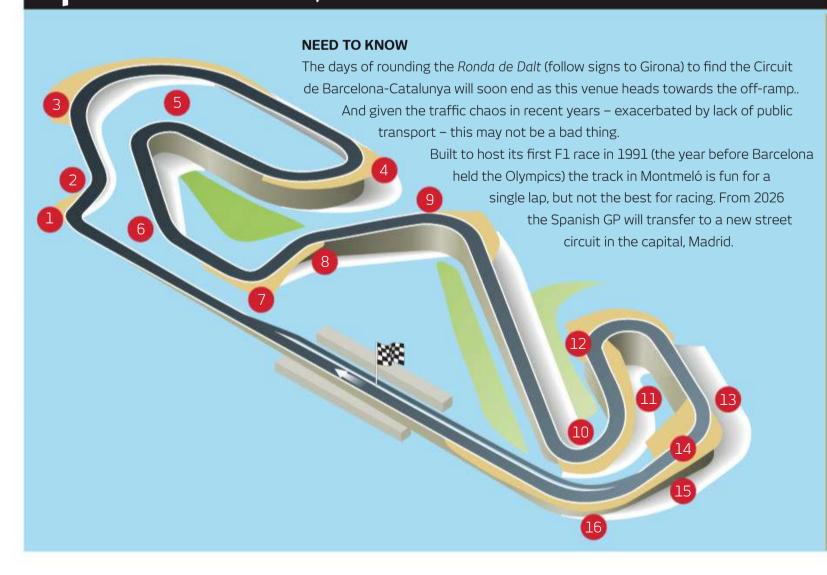
Race leaders 1

Pitstops 33

Overtakes 17

ROUND 10/24 Spain Barcelona, 21-23 June





RACE DATA

Circuit name

Circuit de Barcelona-

Catalunya

First GP 1991

F1 races held 33

Laps 66

Circuit length 2.905 miles

Race distance

1901.645 miles

Direction Clockwise

Winners from pole 24

Race start (UK time) 2pm

LAST RACE HERE (2022)

Winner

Max Verstappen (Red Bull)

Margin of victory 24.090s

Fastest lap 1m16.330s

Max Verstappen

Race leaders 1

Pitstops 43

ROUND 10/23

Austria Spielberg, 28-30 June

RACE DATA

Circuit name

Red Bull Ring

First GP 1970

F1 races held 38

Laps 71

Circuit length 2.683 miles

Race distance

190.420 miles

Direction Clockwise

Winners from pole 14

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

5.155s

Fastest lap 1m07.012s

Max Verstappen

Race leaders 2

Pitstops 44

Overtakes 39



The Styrian hills provide a picturesque backdrop to a circuit which effectively only has nine corners. With gradient, long and short-radius bends, and two long(ish) straights, it has a bit of everything. And last year it was the scene of a track-limits drama. In total the FIA registered over 1,200 violations, leading to a five-hour wait to declare the final result. That was on top of multiple penalties handed out during the 71 laps. Here's hoping the new, Al-augmented system works better this year...

ROUND 12/24

Great Britain Silverstone, 5-7 July



RACE DATA

Circuit name

Silverstone Grand

Prix Circuit

First GP 1950

F1 races held 58

Laps 52

Circuit length 3.660 miles

Race distance

190.262 miles

Direction Clockwise

Winners from pole 22

Race start (UK time) 3pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory 3.798s

Fastest lap 1m30.275s

Max Verstappen

Race leaders 2

Pitstops 24

Overtakes 22

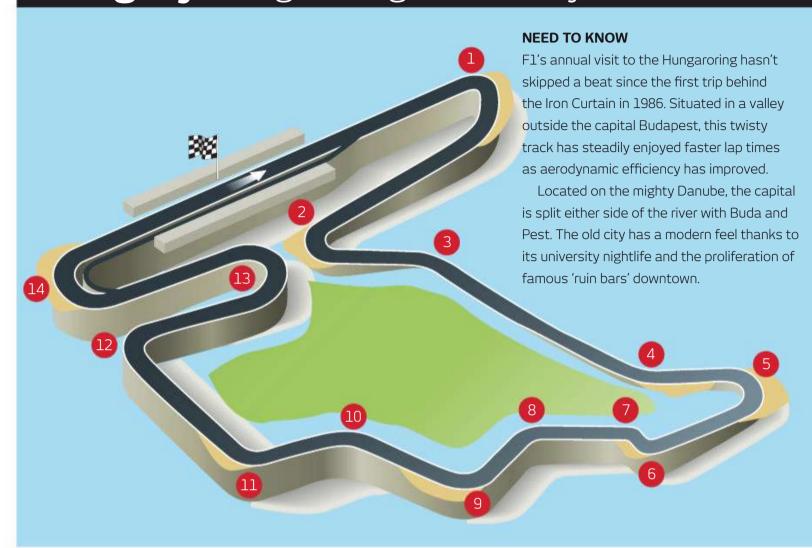
NEED TO KNOW

For the majority of the teams, a home race is a special event. But does it always offer an advantage? While the climate and food are familiar, it can also put more pressure on personnel who want to guarantee a decent result. And while the British fans are respectful of every competitor, they do love to see one of their home drivers perform well.

Lando Norris gave them something to cheer about when he took the lead from Max Verstappen at the start of last year's race. Can he tame the windswept former RAF airfield to stand on the top step of the podium this summer?

ROUND 13/24

Hungary Hungaroring, 19-21 July



RACE DATA

Circuit name

Hungaroring

First GP 1986

F1 races held 38

Laps 70

Circuit length 2.722 miles

Race distance

190.530 miles

Direction Clockwise

Winners from pole 16

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

Fastest lap 1m20.504s

Max Verstappen

Race leaders 1

Pitstops 36

Overtakes 17

ROUND 14/24

Belgium Spa-Francorchamps, 26-28 July

RACE DATA

Circuit name

Circuit de Spa-Francorchamps

First GP 1950

F1 races held 56

Laps 44

Circuit length 4.352 miles

Race distance

191.414 miles

Direction Clockwise

Winners from pole 21

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

22.305s

Fastest lap 1m47.305s

Lewis Hamilton

Race leaders 2

Pitstops 37

Overtakes 47

NEED TO KNOW

In the 2000s the campsites stretching away from Les Combes

were filled with Michael Schumacher supporters who had made the journey from Germany. Today those same campsites are mainly occupied by fans who have travelled from Holland to

cheer on Max Verstappen.

The rural nature of the famous Belgian circuit is part of the charm, nestled in the hills of the High Fens and Ardennes forest. It continues to remain a favourite for drivers, thanks to its flowing sequence of high-speed corners and the concentration required if the rain sets in.



ROUND 15/24

Netherlands Zandvoort, 23-25 August

NEED TO KNOW

Last year this narrow, tight layout produced more on-track overtaking moves than any other race. 112 passes were officially recorded, a result of a number of high-intensity cells of rain that bubbled up over the North Sea and deposited their contents over Zandvoort.

But the soaking didn't drown out the noise and fanfare coming from the Orange Army of Max Verstappen fans situated on the dunes around the track. With a pumping Eurobeat soundtrack, the Dutch GP has become a threeday party. And accessible mainly by bicycle.



RACE DATA

Circuit name

Circuit Zandvoort

First GP 1952

F1 races held 33

Laps 72

Circuit length 2.646 miles

Race distance

190.504 miles

Direction Clockwise

Winners from pole 15

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

Fastest lap 1m13.837s

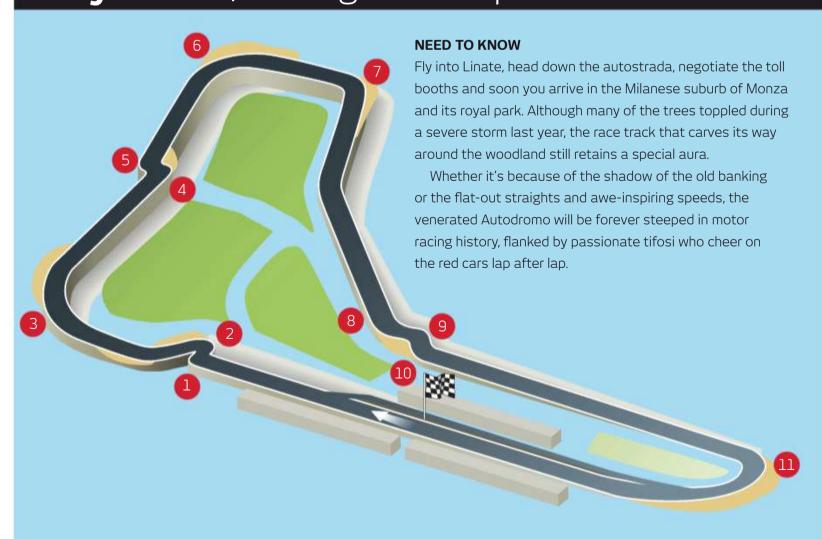
Fernando Alonso

Race leaders 3

Pitstops 101

Overtakes 112

ROUND 16/24 Italy Monza, 30 August-1 September



RACE DATA

Circuit name

Autodromo Nazionale

Monza

First GP 1950

F1 races held 73

Laps 53

Circuit length 3.599 miles

Race distance

190.586 miles

Direction Clockwise

Winners from pole 25

Race start (UK time) 2pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory 6.064s

Fastest lap 1m25.072s

Oscar Piastri

Race leaders 5

Pitstops 25

ROUND 17/24

Azerbaijan Baku, 13-15 September



RACE DATA

Circuit name

Baku City Circuit

First GP 2016

F1 races held 7

Laps 51

Circuit length 3.730 miles

Race distance

190.169 miles

Direction

Anticlockwise

Winners from pole 2

Race start (UK time) 12pm

LAST RACE HERE (2023)

Winner

Sergio Pérez (Red Bull)

Margin of victory 2.137s

Fastest lap 1m43.370s

George Russell

Race leaders 3

Pitstops 23

Overtakes 18

NEED TO KNOW

Of all 24 tracks there's nowhere else quite like the Baku City Circuit, with some of the longest straights and fastest speeds on the calendar. It also features the narrowest and tightest bend of all, where cars weave past the ramparts of a UNESCO-listed castle wall.

The Azerbaijani capital Baku sits on the edge of the Caspian Sea. Modern architecture meets the ancient world with a flag the size of a football pitch (really!) rippling in the



ROUND 18/24

Singapore Marina Bay, 20-22 September



NEED TO KNOW

Today Singapore is a modern financial hub, but remnants of this old British trading port can be found. The colonial residence of Raffles House stands in Fort Canning Park, while the circuit traverses the 114-year-old Anderson Bridge situated next to the cricket club.



RACE DATA

Circuit name

Marina Bay Street Circuit

First GP 2008

F1 races held 14

Laps 62

Circuit length 3.062 miles

Race distance

190.228 miles

Direction Anticlockwise

Winners from pole 9

Race start (UK time) 1pm

LAST RACE HERE (2023)

Winner

Carlos Sainz (Ferrari)

Margin of victory

0.812s

Fastest lap 1m35.867s

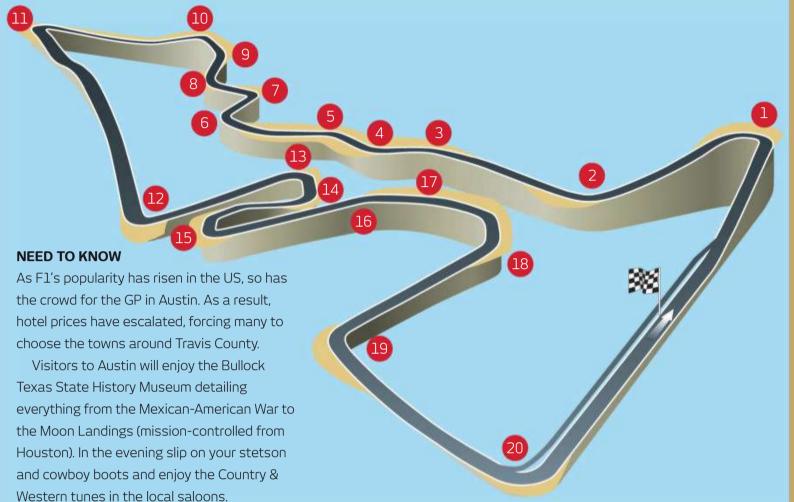
Lewis Hamilton

Race leaders 1

Pitstops 25

ROUND 19/24 USA Austin, 18-20 October





RACE DATA

Circuit name

Circuit of The Americas

First GP 2012

F1 races held 11

Laps 56

Circuit length 3.425 miles

Race distance

191.633 miles

Direction Anticlockwise

Winners from pole 5

Race start (UK time) 7pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

10.730s

Fastest lap 1m38.139s

Yuki Tsunoda

Race leaders 4

Pitstops 36

Overtakes 39

ROUND 20/24

Mexico Mexico City, 25-27 October



RACE DATA

Circuit name

Autódromo Hermanos Rodríguez

First GP 1963

F1 races held 23

Laps 71

Circuit length 2.674 miles

Race distance 189.738 miles

Direction Clockwise

Winners from pole 10

Race start (UK time) 8pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

13.875s

Fastest lap 1m21.334s

Lewis Hamilton

Race leaders 2

Pitstops 38

Overtakes 46

NEED TO KNOW

During the 1960s the Mexican GP was often the final race of the season and the scene of a few title deciders. Crowd trouble in the 1970s led to the event's departure until it was revived in the mid-1980s (until 1992). With upgrades to the Autódromo Hermanos Rodríguez, the parkland venue in Mexico City was granted a third incarnation in 2015.

Since then the promoters have regularly won awards for their fiesta, as they bring the facility to life during the national Day of the Dead celebrations. It also helps that home hero Sergio Pérez is sitting in a



ROUND 21/24

São Paulo Interlagos, 1-3 November



RACE DATA

Circuit name

Autódromo José Carlos Pace

First GP 1973

F1 races held 40

Laps 71

Circuit length 2.677 miles

Race distance

190.064 miles

Direction Anticlockwise

Winners from pole 17

Race start (UK time) 5pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

8.277s

Fastest lap 1m12.486s

Lando Norris

Race leaders 2

Pitstops 51

Overtakes 24



When Argentina was dropped from the schedule in 1999, it left Brazil as the sole Formula 1 race in South America. The shortened version of the original Autodromo that first graced the sport in the early 1970s is still a terrific test for a driver. The tightening hairpins in the middle of the lap demand patience – it's all too tempting to get on the power early.

Last year apocalyptic conditions hit the end of qualifying, turning day to night as a violent storm struck the Interlagos track – but it didn't silence the samba emanating from the noisy Paulistas.

ROUND 22/24

USA Las Vegas, 21-23 November



NEED TO KNOW

A hiccup with a drain cover threatened to derail F1's golden child when Vegas held its first race on the Strip last year. An exciting race saved F1's blushes, but with eye-watering ticket and hotel prices, a few of the peripheral issues around the event left a sour taste in the mouth for some. Hopefully a more sensible timetable will ease the irritation that a number of personnel suffered in its inaugural year. The race looks spectacular on TV, but the trackside experience needs an upgrade.

RACE DATA

Circuit name

Las Vegas Strip Circuit

First GP 2023

F1 races held 1

Laps 50

Circuit length 3.85 miles

Race distance

192.60 miles

Direction Anticlockwise

Winners from pole 0

Race start (UK time) 6am

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

2.070s

Fastest lap 1m35.490s

Oscar Piastri

Race leaders 3

Pitstops 31

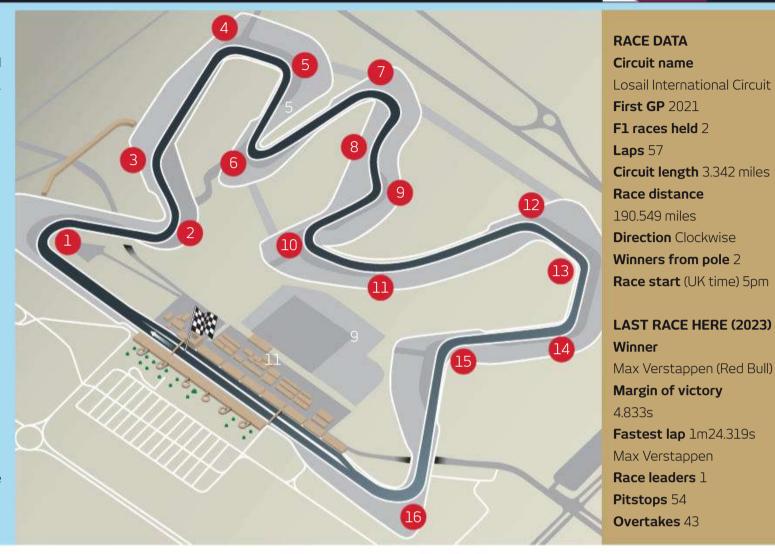
ROUND 23/24

Qatar Losail, 29 November-1 December

NEED TO KNOW

When F1 cars first descended on Losail, initially derided as a motorcycle circuit, the drivers discovered something of a gem. Super-fast, demanding corners were enjoyable to drive – but as ever in the desert, drifting off-line to discover sand can quickly send you off-track.

There's little chance of reaching a barrier, but the issue of track limits necessitated minor changes to the circuit last year — and a rare, additional 15 minute acclimatisation session. It was also the scene of rookie Oscar Piastri's first F1 win in the Saturday sprint and in the same race Max Verstappen clinched his third world title.



ROUND 24/24

Abu Dhabi Yas Marina, 6-8 December

NEED TO KNOW

The 24th race of the season (30 including the six sprints) will set a new record for the biggest number of events in the history of the world championship. The final chequered flag will again fall in the United Arab Emirates, but will the destiny of the drivers' title still be

up for grabs?

The warm climate, lavish hotels and end-of-term feeling usually makes the race around Yas Marina (a short journey from the city of Abu Dhabi) a jolly if often uneventful one as drivers and teams look forward to jetting off into the sunset.



RACE DATA

Circuit name

Yas Marina Circuit

First GP 2009

 $\mathbf{F1}$ races held 15

Laps 58

Circuit length 3.281 miless

Race distance

190.253 miles

Direction Anticlockwise

Winners from pole 10

Race start (UK time) 1pm

LAST RACE HERE (2023)

Winner

Max Verstappen (Red Bull)

Margin of victory

17.993s

Fastest lap 1m26.993s

Max Verstappen

Race leaders 3

Pitstops 37

MAURICE ALTERNATIVE VIEW HAMILTON'S ALTERNATIVE

The annual game of who-drives-where used to provide much intrigue in the run-up to the new season. Shame it's taking a break this year



HOW BORING IS THIS? For the first time since I don't know when, each F1 driver will go straight to the correct motor home when the season starts. There will be none of this wandering, through habit, into their place of work for the previous year and having to immediately reverse out with a nervous nod to the former team principal they'd spent the winter savaging on social media. Where's the spirit of adventure these days? Everyone's become far too formal and polite. We seem to have moved on from the time when Alain Prost publicly compared his Ferrari to a truck and found himself a spectator at the next grand prix and for the following 12 months.

Or how about Wilson Fittipaldi Senior using his daily radio show to announce that his son, Emerson, might be driving for the Brazilian Copersucar team in 1976? Dismissed as wishful



When Senna and McLaren were struggling to agree a deal for 1993, the Brazilian tested an IndyCar in late 1992, in case he decided a Ford-engined McLaren wasn't good enough



The 20 drivers posed for an end-of-season picture in Abu Dhabi last year. Amazingly, the exact same 20 drivers will be in Bahrain this year posing for the start-of-the season shot

thinking, no one took the old boy seriously. Teddy Mayer had no choice in late November when the McLaren boss subsequently received a phone call from Emerson on a Saturday night to say he was leaving - with immediate effect. Fittipaldi had been at the Jochen Rindt Show in Vienna the previous weekend but had said nothing before flying back to Brazil instead of staying on, as expected, for a test at Paul Ricard. No one thought anything of it, such was the assumption that an extension of the contract between the 1974 champion and McLaren was a mere formality.

McLaren wasn't alone as Brabham, Lotus and Surtees had yet to confirm their driver line-ups. If you think that's running things a bit close, the sense of urgency takes on a new dimension when you recall that the first race of 1976 in Brazil was scheduled for 25 January, a matter of weeks away.



Mayer and Fittipaldi celebrate the latter's last win for McLaren in

1975. It was a shock to Mayer when Fittipaldi left the team

Derek Daly was an early example of Frank Williams changing drivers, although in

this case it was not because of the financial demands of a world champion



When it came to eleventh-hour contractual vacillation, Ayrton Senna was your man. The first bout of uncertainty kicked off in late 1989 when Senna held a press conference in Brazil and declared that FISA (then, the governing body of motor sport) and its president, Jean-Marie Balestre, had manipulated the outcome of the 1989 world championship in favour of Prost. Naturally, this did not go down well in Paris.

If you think modesty is a missing virtue with the present incumbent of the presidential post, then be assured that Mohammed Ben Sulayem is a mere out-of-tune choir boy compared with his trumpeting predecessor. In one of many thundering statements, Balestre threatened to remove Senna's superlicence if these scurrilous allegations were not withdrawn.

This one ran until the eleventh hour. Despite a flurry of statements and what seemed a rapprochement, no one – least of all McLaren – could be 100% certain Ayrton would turn up for the first GP the following March. He did arrive, proceeded to win the race, and then the title.

This brinkmanship would be good practice for 1993 when Senna's failure to agree terms with McLaren led to late-night shuttle diplomacy between the team's lawyer in Woking and Ayrton's office in São Paulo. This went on for several races, Senna not arriving for one until shortly after practice had begun. No media work; no debriefing; just turn up, pull on overalls and crash helmet and get down to business.



Drivers change for many reasons. Prost's criticism of Ferrari in 1991 was one example...

Today's team principals probably fret if there is no advance strategy in place for their drivers' e-scooters at Monaco next May.

Frank Williams was never a great one for hanging on to his drivers, particularly after they had won a championship. More so if they had only scored a handful of points. While Nigel Mansell and Damon Hill could at least provide decent justification for financial demands that Frank found unreasonable, the same did not apply to Derek Daly in 1982 when drafted in by Williams after four races following the sudden

retirement of Carlos Reutemann.

I happened to be ghosting Daly's column for a Sunday newspaper in his native Dublin. When we reached the final race in Las Vegas, Derek was naturally keen to inform readers about his future – one way or the other. Knowing that Frank was fully engaged that weekend with winning the championship for Keke Rosberg, I carefully chose a quiet moment to ask for a steer on what Daly might say in his column without actually revealing the facts and, more importantly, avoiding the appearance of being stupid. I took Frank's assurance that "everything will be alright" as a reasonably positive sign, and wrote as much.

It so happened the sports editor of the Dublin Sunday paper had a stutter. The poor man was literally speechless with indignation when he got through to me late on the Sunday night. Not only had his star F1 columnist with the supposed inside line assured readers that the chances of a contract renewal were high, but a rival paper had carried a story, industriously lifted from a French news agency, that Jacques Laffite would be joining Rosberg and Ireland's pride and joy was out on his backside. During a brief break in the flow of Irish invective coming my way, I ventured in mitigation this seemed unlikely. The following day, Williams confirmed Laffite for 1983.

The next time I met Frank, I confronted him about our conversation. "Ah yes, sorry," he said, without a flicker or so much as looking down at his shoes. "I had to say that." Then he flashed his winning smile before adding: "You know how it is, Maurice..." "Absolutely, Frank..." I mean, what else can you say? More fool me.

The conversation then moved on. Most likely to the prospects for René Arnoux at Ferrari, or Eddie Cheever at Renault. Or any of the 13 driver changes among the 16 teams. Were Frank still with us today, he would probably have been bored stiff during the past few months.

FRANK WILLIAMS WAS NEVER A GREAT ONE FOR HANGING ON TO HIS DRIVERS, PARTICULARLY AFTER THEY HAD WON A CHAMPIONSHIP



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RACE PREVIEW BAHRAIN GP

F1 WORLD CHAMPIONSHIP ROUND 1

29 February-2 March 2024 Bahrain International Circuit





THE MAIN EVENT

Celebrating the 20th anniversary of its first appearance on the F1 calendar, Bahrain is now firmly entrenched as the location for the season opener. Melbourne used to be the preferred option but the ever-expanding calendar means logistical prudence now shapes the run of events - plus Bahrain offers the opportunity to save money in the cost-cap era by hosting the pre-season test a week before everything kicks off for real.

Heat - or rather how new cars would react to it - used to be one of F1's great unknowns early in a season. Now these Middle East races have colonised the opening rounds the opposite is often the case: teams can struggle when they get to the cooler and wetter ambients elsewhere.

Last time around the FIA shaved 80 metres off the main DRS zone. At the time of writing further changes are possible. And don't forget the race is on Saturday this year...

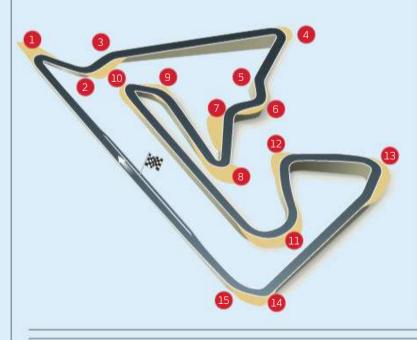
2023 RACE RECAP

The first round of the season created the template for what was to come: absolute dominance by Red Bull and, in particular, Max Verstappen. Max qualified on pole, saw off Ferrari's Charles Leclerc on the opening lap, then ticked off his target laptimes. Without a serious challenge he nursed his tyres to the flag 12s ahead of team-mate Sergio Pérez.

Leclerc ought to have finished third but he stopped on lap 40 with an engine issue which hadn't been flagged up in the many kilometres Ferrari-engined cars had covered in testing. Instead Fernando Alonso claimed the final spot on the podium for the seemingly resurgent Aston Martin.

KEY CORNER: TURN 4

Very challenging since it comes at the end of a DRS-assisted straight and isn't a conventional hard stop. Drivers need to keep momentum but this can take them over track limits at the exit.



RACE DATA

Circuit name Bahrain

International Circuit First grand prix 2004 Number of laps 57 Circuit length 3.362 miles Race distance 191.530 miles Lap record 1m31.447s Pedro de la Rosa (2005) F1 races held 19 Winners from pole 9

Pirelli compounds C1, C2, C3

CAR PERFORMANCE

Downforce level Medium Cooling requirement High Full throttle 66% Top speed 203mph Average speed 137mph

TIMETABLE (UK TIME)

Thursday 29 February **Practice 1** 11:30-12:30 **Practice 2** 15:00-16:00 Friday 1 March **Practice 3** 12:30-13:30 **Qualifying** 16:00-17:00

Saturday 2 March

Race 15.00

Live coverage Sky Sports F1 Highlights Channel 4

THE PAST FIVE WINNERS HERE...











2023	2022	2021	2020	2019
Max	Charles	Lewis	Lewis	Lewis
Verstappen	Leclerc	Hamilton	Hamilton	Hamilton
Red Bull	Ferrari	Mercedes	Mercedes	Mercedes



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F1 WORLD CHAMPIONSHIP ROUND 2

RACE PREVIEW SAUDI ARABIAN GP

7-9 March 2024 Jeddah Corniche Circuit





THE MAIN EVENT

The spectacular street circuit on Jeddah's Red Sea coast is maturing nicely as the organisers respond to feedback. After the first two races there were marred by crashes and multiple restarts, several barriers and fences were moved to improve sightlines. Some corners have also been reprofiled with different kerbing to deter drivers from taking liberties with track limits.

In 2023 the FIA moved the first DRS detection point from the entrance to the exit of the last corner. While the original configuration had prompted some entertaining tactics as drivers tried to avoid giving rivals an advantage, this was deemed dangerous - as when Max Verstappen and Lewis Hamilton collided in 2021. Not that this stopped Lewis winning the race - his last victory to date, incidentally...

As with Bahrain, the race will be held on Saturday. The holy month of Ramadan begins on the Sunday evening.

2023 RACE RECAP

Another Red Bull 1-2 – and there would be plenty more to come by season's end - but this time with the regular positions reversed as Sergio Pérez prevailed over Max Verstappen. Yes, much of that was down to a driveshaft failure in qualifying which left Max 15th on the grid, but the fact of someone else being on the top step was intoxicating enough for many giddy pundits to predict a title battle between the two Red Bull drivers. There was even some chafing and to-and-fro over the team radio as Max and Checo fought for the fastest-lap point.

Having inherited his podium finish in Bahrain, Fernando Alonso accomplished this feat on merit in Jeddah although a controversial pitstop penalty, later overturned, meant a surprised George Russell fulfilled the post-race ceremonials. Ferrari was barely in the hunt as both drivers faded in the final stint on hard tyres.

RACE DATA

Circuit name Jeddah Corniche Circuit

First grand prix 2021

Number of laps 50

Circuit length 3.836 miles

Race distance 191.662 miles

Lap record 1m30.734s Lewis Hamilton (2021)

F1 races held 3

Winners from pole 2

Pirelli compounds C2, C3, C4

CAR PERFORMANCE

Downforce level Medium Cooling requirement Medium Full throttle 79%

Top speed 200mph

Average speed 156mph

TIMETABLE (UK TIME)

Thurday 7 March

Practice 1 13:30-14:30

Practice 2 17:00-18:00

Friday 8 March

Practice 3 13:30-14:30

Qualifying 17:00-18:00

Saturday 9 March

Highlights Channel 4

Race 17.00

Live coverage Sky Sports F1

THE PAST WINNERS HERE...

KEY CORNER: TURN 1 A fiddly chicane at the

end of the pit straight,

where drivers have to shed around 210km/h -

what could possibly

go wrong?





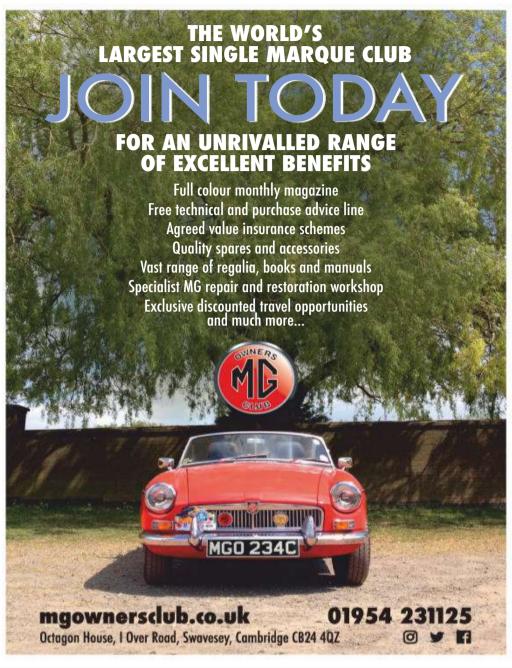


Sergio Pérez Red Bull

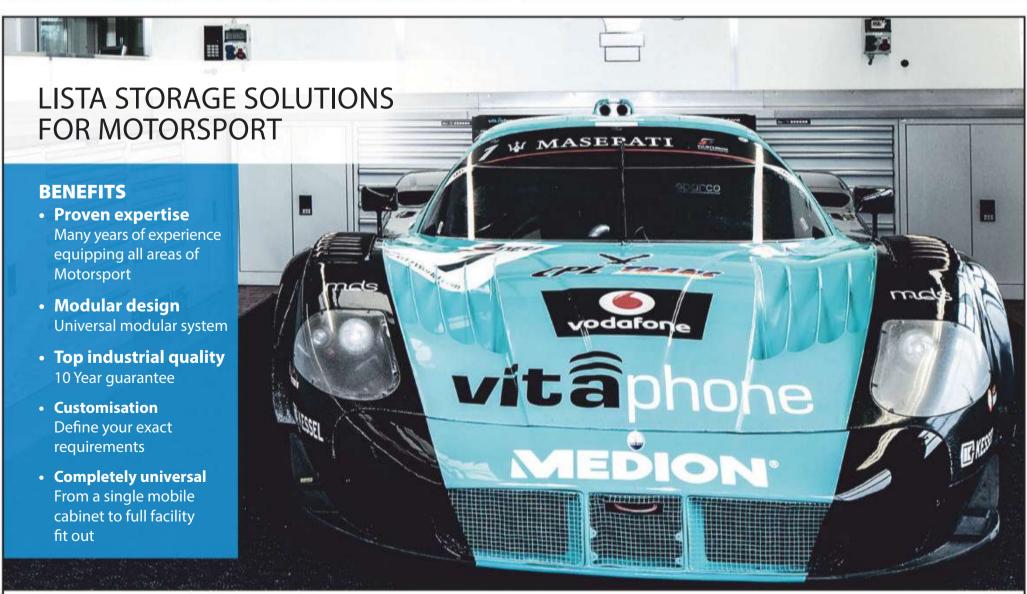
Max Verstappen Red Bull

Lewis Hamilton Mercedes













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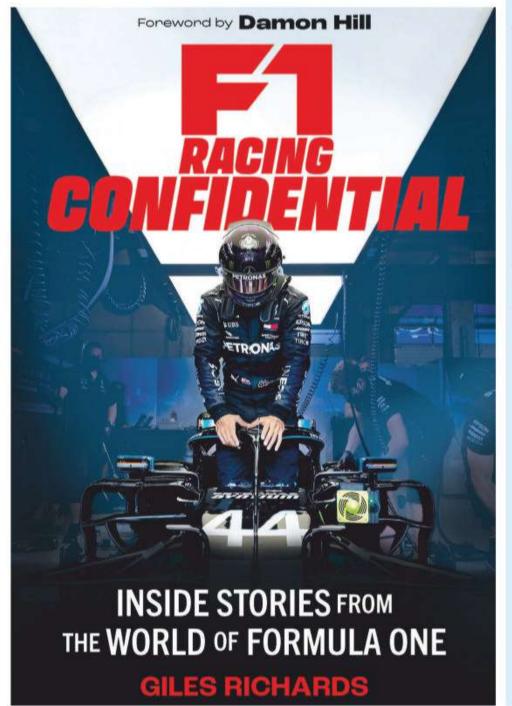
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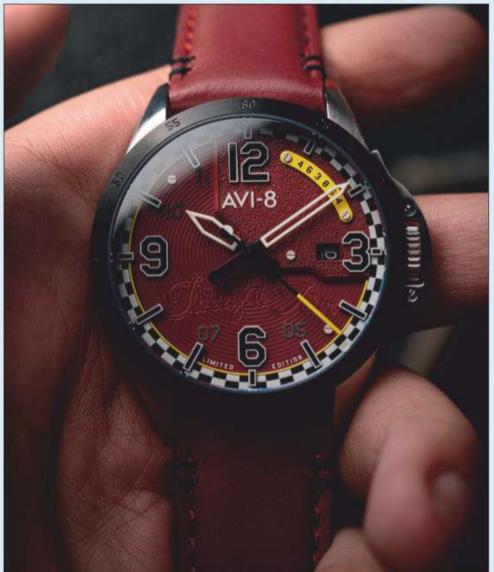
mombooks.com

F1 Racing Confidential, by Guardian and Observer journalist Giles Richards – famed within the media centre for his jumbo boxes of red cabbagebased salads – takes a granular view of what makes F1 tick. It's an access-all-areas look at who does what and how it's done, from the team principals and drivers, through to the mechanics. There's even an interview with former GP Racing editor

Matt Bishop, latterly head of comms at McLaren and Aston Martin, about the dark arts of spin.

While several faces are familiar – step forward Christian Horner and Toto Wolff – there is some great insight to be had from some of the less media-exposed experts such as strategist Ruth Buscombe, Pirelli tyre engineer Peter Mabon, and aerodynamicist Marianne Hinson.







AVI-8 P-51 MUSTANG TWILIGHT TEAR AUTOMATIC LIMITED EDITION

Price £305

avi-8.com

Aviation-inspired watch brand AVI-8 has launched another limited-edition timepiece featuring real aircraft parts and a fascinating connection to history. The P-51 Mustang 'Twilight Tear' now resides in the Fagen Fighters WWII Museum founded by Minnesota businessman Ron Fagen. Having been delivered near the end of the war it was sold on and passed through various hands including the Israeli Air Force. Only while

undergoing restoration in the 2000s did its wartime history emerge: flown by Hubert 'Bill' Davis and named after his favourite racehorse, it had participated in the air raid on the Eagle's Nest.

Limited to 200 pieces, the watch features a Japanese automatic three-hands movement with a date feature, anti-reflective sapphire lens, and luminous hands and indices over a multi-layer dial.





AMALGAM ASTON MARTIN COLLECTION BY ALAN THORNTON

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Renowned large-scale modelmaker each car. This is used to create the Amalgam is already an official licensed partner of Aston Martin. Now it has added fine-art prints to its portfolio, tying up with Spitalfieldsbased artist Alan Thornton, famed for his work in augmenting original photography with industrial textures during the screen-printing process.

In creating the Aston Martin collection Thornton begins by shooting bespoke studio images of mesh stencil for the final printing process where inks are hand-pressed through the screen. Each print is one metre wide and limited to 200. Further works produced by the dye transfer technique range from 1m to 1.5m wide and can be hung without a frame. Amalgam can also facilitate bespoke commissions in super-large format (screen prints up to 1.5m wide, dye transfers up to 2.4m wide).

DRIVE TO SURVIVE SEASON SIX

Price from £4.99pcm netflix.com

While time-served F1 fans tend to be divided about its accuracy or otherwise, there's no doubting that the Netflix docuseries Drive to Survive has expanded F1's global reach and fanbase. So successful has it been that sports as diverse as cycling and rugby have rushed to copy the format. The sixth series 'drops' on 23 February and offers the usual blend of rapidly edited action, faders-up-tomaximum sound effects and jealousyinducing behind-the-scenes-access.

Detail-minded readers will cavil at the way the producers intercut from a dramatic on-track incident at one circuit to a 'reaction shot' in the garages and/or pitwall from an entirely different event, but this show is all about entertainment and is expertly crafted. 2023 might have been rather dry in sporting terms but Drive to Survive makes it seem like a season for the ages.









enough to convince him to stay.

The thing is, Ferrari isn't markedly better off. After making Max Verstappen sweat in the early races of 2022, it plateaued and is seemingly reliant on Red Bull's very rare off-weekends to show the occasional glimmer. Team boss Fréd Vasseur has also found it tough to compensate for a recent brain drain, with

ALTHOUGH IT'S A TERRIBLE CLICHÉ, IT'S THE EMOTION THAT MAKES A FERRARI SWITCH SO APPEALING

Laurent Mekies leaving to head up RB, David Sanchez switching to McLaren, and the delay in confirming a new technical director. Recruits nicked from rivals must undertake a period of gardening lead so replacements can be years in the making. Hamilton, 39, can't necessarily wait for Ferrari to recover to the top. And 'non-poaching' clauses in his Mercedes colleagues' contracts means he can't single-handedly bring a load of key personnel from Brackley to Maranello.

Although it's a terrible cliché, it's the emotion that makes a Ferrari switch so appealing. But, in this case, not simply the prestige that comes with punching in at Fiorano or completing the arc that hero

Ayrton Senna couldn't. Instead, it seems that for all the success they achieved together, Mercedes didn't make Hamilton feel loved enough when they entered contract talks last year. Negotiations dragged on longer than expected. On the surface, what looked to be a two-year extension now turns out to be a fixed one-year term with a lever for another season. Toto Wolff said: "We're big boys – we knew that by signing a short-term contract, it could be of benefit for both sides. We couldn't commit for a longer period. He's taken the option to exit."

Merc didn't want to offer a multi-year deal this time. Perhaps that's because the team didn't feel it could keep golden child Andrea Kimi Antonelli in a holding pattern as he continues to excel in the junior categories. Imagine the backlash for showing a seventime world champion the door. Instead, better to give him a slightly leaky contract so he can feel like he's leaving on his own terms.

Ferrari president John Elkann, on the other hand, *did* make Hamilton feel special. He made his admiration for Lewis clear over dinner. And Vasseur – who led the ART Grand Prix outfit as Hamilton won the 2006 GP2 Series crown – is the only rival F1 team boss who could have tempted him across. In return, they get one of motorsport's best ever, the share price rises, and Ferrari looks more appealing to new recruits.

TONIGHT YOU ARE THE SPECIAL ONE

Lewis Hamilton isn't short of a quid or two so moving to Ferrari for what are likely to be his final seasons in Formula 1 isn't about topping up his nest egg. He won't have lost much sleep over deciding whether a guaranteed pension in the form of a long-term Mercedes ambassadorial role plus a lifetime supply of company cars is worth years of attending tedious sponsor events. Of course, Hamilton will get paid handsomely for his time in Rosso Corsa and Ferrari will invest generously in his charitable foundations, but money is not the motivating factor here.

If Hamilton is honest, nor is competitiveness. He will have assessed whether Mercedes is in one of two places. Perhaps, at the time of his decision, the data indicated that its new car concept for 2024 had brought a major step in performance. However, it remains highly unlikely Red Bull will be caught during this rules cycle. Alternatively,



Adversaries this season, Hamilton and Leclerc will be Ferrari teammates in 2025. But will either of them be able to catch Red Bull?

the numbers suggested the W15 is actually not considerably better than its two lacklustre predecessors. In both scenarios an eighth world title will likely continue to elude him and new contracts for Toto Wolff and James Allison aren't

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